

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Airites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (214)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:50	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
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7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
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Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Aizveji (kad. apz. 56960040532) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (170)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Idle start wind speed: Cut in wind speed from power curve

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3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
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Total, worst case												
Sun reduction												
Oper. time red.												
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Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

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10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Aizveji (kad. apz. 76860060094) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (201)

Assumptions for shadow calculations

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18	08:37 16:15	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
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27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
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29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Akoti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (173)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:47	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 18:16	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:44 15:37
17	08:39 16:13	07:40 17:21	06:28 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:03	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:24 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:20 18:28	05:59 20:32	04:53 21:33	04:24 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
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27	08:24 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:21	07:13 18:59	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Alinas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (33)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:44
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7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
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21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
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27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:37	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
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30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Amati - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (164)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
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25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Aparnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (60)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
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7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
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10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
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13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
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15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
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28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Aramsala - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (212)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:47	08:14 16:45	07:10 17:47	06:48 19:52	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:27	06:17 20:13	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:12 16:47	07:08 17:49	06:45 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:25	06:19 20:11	07:19 18:50	07:24 16:33	08:25 15:43
3	08:50 15:50	08:10 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:51	08:08 16:51	07:03 17:53	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
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19	08:36 16:17	07:35 17:25	06:23 18:25	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
20	08:34 16:19	07:33 17:27	06:20 18:27	05:59 20:32	04:53 21:33	04:24 22:09	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:10	04:55 21:47	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:31 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:00 17:59	08:07 15:55	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:25 22:10	04:58 21:44	05:59 20:37	07:01 19:15	08:03 17:56	08:09 15:54	08:49 15:39
24	08:28 16:27	07:23 17:36	06:10 18:36	05:49 20:40	04:46 21:40	04:25 22:10	05:00 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:42	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:31	07:18 17:40	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:06	07:09 16:49	08:15 15:50	08:50 15:41
27	08:23 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:26	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:07 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:09 21:33	06:11 20:21	07:13 18:58	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09	05:11 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:50		04:36 21:51		05:13 21:29	06:15 20:16		07:20 16:38		08:50 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Araji - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (205)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:50 15:48	08:14 16:45	07:10 17:47		06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:27	06:17 20:14		07:17 18:53	25	17:47 (B3) 18:12 (B3)	07:22 16:35	08:24 15:44
2	08:50 15:49	08:12 16:47	07:08 17:49		06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:25	06:19 20:11		07:19 18:50	25	17:47 (B3) 18:12 (B3)	07:24 16:33	08:26 15:43
3	08:50 15:50	08:10 16:49	07:05 17:51		06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08		07:21 18:48	24	17:47 (B3) 18:11 (B3)	07:27 16:31	08:27 15:43
4	08:49 15:51	08:08 16:51	07:03 17:54		06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06		07:23 18:45	23	17:48 (B3) 18:11 (B3)	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	5	17:20 (B3) 17:25 (B3)	06:38 20:01	05:23 21:03	04:31 21:58	05:23 22:06	06:25 21:19		07:25 18:42	22	17:48 (B3) 18:10 (B3)	07:31 16:27	08:30 15:41
6	08:48 15:54	08:04 16:56	06:57 17:58	13	17:15 (B3) 17:28 (B3)	06:35 20:03	05:21 21:05	04:30 21:59	05:25 22:06	06:27 21:17		07:27 18:40	19	17:49 (B3) 18:08 (B3)	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	17	17:14 (B3) 17:31 (B3)	06:32 20:05	05:18 21:07	04:29 22:00	05:27 21:15	06:29 19:58		07:29 18:37	16	17:50 (B3) 18:06 (B3)	07:35 16:23	08:33 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	20	17:12 (B3) 17:32 (B3)	06:30 20:07	05:16 21:09	04:29 22:01	05:29 21:13	06:31 19:55		07:31 18:35	10	17:53 (B3) 18:03 (B3)	07:37 16:20	08:35 15:39
9	08:46 15:59	07:58 17:03	06:50 18:04	22	17:10 (B3) 17:32 (B3)	06:27 20:09	05:14 21:11	04:28 22:02	05:31 21:10	06:33 19:52		07:33 18:32			07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	24	17:10 (B3) 17:34 (B3)	06:24 20:11	05:12 21:13	04:27 22:03	05:33 22:02	06:35 21:08		07:35 18:29			07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	25	17:09 (B3) 17:34 (B3)	06:22 20:13	05:10 21:15	04:27 22:04	05:35 22:01	06:37 19:47		07:37 18:27			07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	25	17:08 (B3) 17:33 (B3)	06:19 20:15	05:08 21:17	04:26 22:05	05:37 22:00	06:39 19:44		07:39 18:24			07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	26	17:07 (B3) 17:33 (B3)	06:17 20:18	05:06 21:19	04:26 22:06	05:39 21:59	06:41 19:42		07:41 18:22			07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	25	17:08 (B3) 17:33 (B3)	06:14 20:20	05:04 21:21	04:25 22:06	05:41 21:58	06:43 19:39		07:44 18:19			07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	24	17:08 (B3) 17:32 (B3)	06:11 20:22	05:02 21:23	04:25 22:07	05:43 21:56	06:45 19:36		07:46 18:16			07:52 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	23	17:08 (B3) 17:31 (B3)	06:09 20:24	05:00 21:25	04:25 22:08	05:45 21:55	06:47 20:54		07:48 18:14			07:55 16:05	08:44 15:37
17	08:38 16:13	07:40 17:21	06:28 18:21	22	17:09 (B3) 17:31 (B3)	06:06 20:26	04:58 21:27	04:25 22:08	05:49 21:54	06:49 20:52		07:50 18:11			07:57 16:04	08:45 15:37
18	08:37 16:15	07:37 17:23	06:26 18:23	20	17:09 (B3) 17:29 (B3)	06:04 20:28	04:56 21:29	04:25 22:09	05:49 21:52	06:51 20:49		07:52 18:09			07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:25	17	17:10 (B3) 17:27 (B3)	06:01 20:30	04:55 21:31	04:25 22:09	05:51 21:51	06:53 20:47		07:54 18:06			08:01 16:00	08:47 15:38
20	08:34 16:19	07:33 17:27	06:20 18:28	12	17:13 (B3) 17:25 (B3)	05:59 20:32	04:53 21:33	04:25 22:09	05:53 21:49	06:55 20:44		07:56 18:04			08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30		05:56 20:34	04:51 21:34	04:25 22:10	04:25 21:48	05:55 20:42	06:57 19:20		07:58 18:01			08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32		05:54 20:36	04:49 21:36	04:25 22:10	04:25 21:46	05:57 20:39	06:59 19:17		08:01 17:59			08:07 15:56	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34		05:51 20:38	04:48 21:38	04:25 22:10	04:25 21:44	05:59 20:37	07:01 19:15	17:58 (B3)	08:03 17:56	10	18:08 (B3) 17:55 (B3)	08:09 17:54	08:49 15:39
24	08:28 16:27	07:23 17:36	06:10 18:36		05:49 20:40	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	17:55 (B3)	08:05 17:54	15	18:10 (B3) 17:53 (B3)	08:11 17:51	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38		05:46 20:43	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	17:53 (B3)	07:07 16:52	18	18:11 (B3) 17:51 (B3)	08:13 17:50	08:50 15:41
26	08:25 16:32	07:18 17:40	06:04 18:40		05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	17:51 (B3)	07:09 16:49	21	18:11 (B3) 18:12 (B3)	08:15 17:50	08:50 15:41
27	08:23 16:34	07:15 17:43	06:02 18:42		05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	17:50 (B3)	07:11 16:47	23	18:13 (B3) 17:49 (B3)	08:17 17:43	08:50 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44		05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:35	06:09 20:24	07:11 19:01	17:49 (B3)	07:13 16:45	24	18:13 (B3) 17:48 (B3)	08:18 17:46	08:51 15:43
29	08:20 16:38		06:56 19:46		05:37 20:51	04:39 21:48	04:28 22:09	05:09 21:33	06:11 20:21	07:13 18:58	17:48 (B3)	07:16 16:42	25	18:13 (B3) 17:48 (B3)	08:20 17:47	08:51 15:44
30	08:18 16:40		06:54 19:48		05:34 20:53	04:38 21:49	04:29 22:09	05:11 21:31	06:13 20:19	07:15 18:56	17:47 (B3)	07:18 16:40	26	18:13 (B3) 17:48 (B3)	08:22 17:47	08:51 15:45
31	08:16 16:42		06:51 19:50			04:36 21:51		05:13 21:29	06:15 20:16			07:20 16:38			08:51 15:46	
Potential sun hours	235	266	366		426	508	529	529	469	385		324		247	216	
Total, worst case				320							162		164			
Sun reduction				0.41							0.43		0.26			
Oper. time red.				0.98							0.98		0.98			
Wind dir. red.				0.65							0.65		0.65			
Total reduction				0.26							0.27		0.16			
Total, real				84							44		27			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Atvari - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (95)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ausekli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (109)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
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19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ausmas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (158)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	07:49 (B14) 19:53	06:49 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:17 16:36	08:24 15:45
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22	08:32 16:24	07:28 17:32	06:16 18:32	08:03 (B14) 19:59	05:54 21:37	04:50 22:10	04:58 21:46	04:58 21:05	05:57 19:18	06:59 18:00	08:01 15:56	08:49 15:40
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		188	127							314		
Sun reduction		0.20	0.41							0.26		
Oper. time red.		0.98	0.98							0.98		
Wind dir. red.		0.63	0.63							0.63		
Total reduction		0.12	0.25							0.16		
Total, real		23	32							50		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Auzani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (107)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

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Idle start wind speed: Cut in wind speed from power curve

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15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
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18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
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23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
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27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:37	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
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29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Avenes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (132)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45		07:11 17:48		05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36
2	08:51 15:50	08:13 16:48		07:08 17:50	25	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34
3	08:50 15:51	08:11 16:50		07:06 17:52	25	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32
4	08:50 15:52	08:09 16:52		07:03 17:54	24	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30
5	08:49 15:54	08:07 16:54		07:01 17:56	22	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:25 18:43	07:31 16:27
6	08:49 15:55	08:05 16:57		06:58 17:58	21	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25
7	08:48 15:56	08:03 16:59		06:55 18:01	18	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23
8	08:48 15:58	08:01 17:01		06:53 18:03	13	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21
9	08:47 16:00	07:58 17:03		06:50 18:05	5	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19
10	08:46 16:01	07:56 17:05		06:48 18:07		05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17
11	08:45 16:03	07:54 17:08		06:45 18:09		05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15
12	08:44 16:05	07:52 17:10		06:42 18:11		05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13
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15	08:41 16:10	07:45 17:17		06:34 18:18		05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08
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17	08:39 16:14	07:40 17:21		06:29 18:22		04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04
18	08:38 16:16	07:38 17:23		06:26 18:24		04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03
19	08:36 16:18	07:36 17:26		06:24 18:26		04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01
20	08:35 16:20	07:33 17:28	08:00 (B14)	06:21 18:28		04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59
21	08:33 16:22	07:31 17:30	08:05 (B14)	06:18 18:30		04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58
22	08:32 16:24	07:28 17:32	08:09 (B14)	06:16 18:32		04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56
23	08:30 16:26	07:26 17:34	08:10 (B14)	06:13 18:34		04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55
24	08:29 16:28	07:23 17:37	08:11 (B14)	06:10 18:36		04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53
25	08:27 16:30	07:21 17:39	08:12 (B14)	06:08 18:39		04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:51
26	08:26 16:32	07:18 17:41	08:13 (B14)	06:05 18:41		04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51
27	08:24 16:34	07:16 17:43	08:14 (B14)	06:02 18:43		04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:17 15:50
28	08:22 16:37	07:13 17:45	08:15 (B14)	06:00 18:45		04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:19 15:48
29	08:20 16:39			05:57 19:47		04:40 20:51	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 15:47
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31	08:17 16:43			05:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17	07:20 18:38		08:24 15:47
Potential sun hours	235	266		366		426	508	529	529	469	385	324
Total, worst case												
Sun reduction		171		153							328	
Oper. time red.		0.20		0.41							0.26	
Wind dir. red.		0.63		0.98							0.98	
Total reduction		0.12		0.63							0.63	
Total, real		21		39							0.16	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Avoti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (2)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
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5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
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22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
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30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
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Potential sun hours	235	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

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	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Avotini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (114)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	08:04 (B1) 17:47	06:49 19:53	05:32 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36
2	08:51 15:49	08:13 16:47	07:08 17:50	08:07 (B1) 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34
3	08:50 15:51	08:11 16:50	07:06 17:52	08:13 (B1) 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31
4	08:50 15:52	08:09 16:52	07:03 17:54	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29
5	08:49 15:53	08:07 16:54	07:00 17:56	07:00 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27
6	08:49 15:55	08:05 16:56	06:58 17:58	06:58 17:58	06:35 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25
7	08:48 15:56	08:03 16:59	06:55 18:00	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 20:58	07:30 18:38	07:36 16:23
8	08:48 15:58	08:01 17:01	06:53 18:03	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 20:55	07:32 18:35	07:38 16:21
9	08:47 15:59	07:58 17:03	06:50 18:05	06:50 18:05	06:27 20:10	05:15 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 20:53	07:34 18:32	07:40 16:19
10	08:46 16:01	07:56 17:05	06:47 18:07	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:08	06:35 20:50	07:36 18:30	07:42 16:17
11	08:45 16:03	07:54 17:08	06:45 18:09	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 20:47	07:38 18:27	07:44 16:15
12	08:44 16:04	07:52 17:10	06:42 18:11	06:42 18:11	06:20 20:16	05:08 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 20:45	07:40 18:25	07:46 16:13
13	08:43 16:06	07:50 17:12	06:40 18:13	06:40 18:13	06:17 20:18	05:06 21:20	04:43 22:06	05:39 21:59	06:41 21:42	06:41 20:42	07:42 18:22	07:49 16:11
14	08:42 16:08	07:47 17:14	06:37 18:15	06:37 18:15	06:14 20:20	05:04 21:22	04:46 22:07	05:41 21:58	06:43 20:59	06:43 20:39	07:44 18:19	07:51 16:09
15	08:41 16:10	07:45 17:17	06:34 18:17	06:34 18:17	06:12 20:22	05:02 21:24	04:46 22:07	05:43 21:57	06:45 20:57	06:45 20:37	07:46 18:17	07:53 16:07
16	08:40 16:12	07:43 17:19	06:32 18:20	06:32 18:20	06:09 20:24	05:01 21:26	04:45 22:08	05:44 21:55	06:47 20:54	06:47 20:34	07:48 18:14	07:55 16:06
17	08:39 16:14	07:40 17:21	06:29 18:22	06:29 18:22	06:07 20:26	04:59 21:27	04:45 22:09	05:47 21:54	06:49 20:52	06:49 20:31	07:50 18:12	07:57 16:04
18	08:38 16:16	07:38 17:23	06:26 18:24	06:26 18:24	06:04 20:28	04:57 21:29	04:45 22:09	05:41 21:53	06:51 20:50	06:51 20:29	07:52 18:09	07:59 16:02
19	08:36 16:18	07:36 17:25	06:24 18:26	06:24 18:26	06:02 20:30	04:55 21:31	04:45 22:09	05:51 21:51	06:53 20:47	06:53 20:26	07:55 18:07	08:01 16:01
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 18:28	05:59 20:33	04:53 21:33	04:45 22:10	05:53 21:50	06:55 20:45	06:55 20:23	07:57 18:04	08:03 15:59
21	08:33 16:22	07:31 17:30	06:18 18:30	06:18 18:30	05:57 20:35	04:52 21:35	04:45 22:10	05:55 21:48	06:57 20:42	06:57 20:20	07:59 18:02	08:05 15:58
22	08:32 16:24	07:28 17:32	06:15 18:32	06:15 18:32	05:54 20:37	04:50 21:37	04:45 22:10	05:57 21:46	06:59 20:40	06:59 20:18	08:01 17:59	08:07 15:56
23	08:30 16:26	07:26 17:34	06:13 18:34	06:13 18:34	05:52 20:39	04:48 21:38	04:46 22:10	05:59 21:45	07:01 20:37	07:01 20:15	08:03 17:57	08:09 15:55
24	08:29 16:28	07:23 17:37	06:10 18:36	06:10 18:36	05:49 20:41	04:47 21:40	04:46 22:11	05:01 21:43	06:01 20:35	06:01 20:12	07:03 17:55	08:05 15:53
25	08:27 16:30	07:21 17:39	06:07 18:38	06:07 18:38	05:47 20:43	04:45 21:42	04:46 22:11	05:03 21:41	06:03 20:32	06:03 20:10	07:05 17:52	08:07 15:52
26	08:26 16:32	07:18 17:41	06:05 18:41	06:05 18:41	05:44 20:45	04:44 21:43	04:47 22:10	05:04 21:39	06:05 20:30	06:05 20:07	07:07 17:50	08:10 15:52
27	08:24 16:34	07:16 17:43	06:02 18:43	06:02 18:43	05:42 20:47	04:42 21:45	04:47 22:10	05:06 21:38	06:07 20:27	06:07 20:04	07:09 17:47	08:12 15:51
28	08:22 16:36	07:13 17:45	05:59 18:45	05:59 18:45	05:39 20:49	04:41 21:47	04:48 22:10	05:08 21:36	06:09 20:24	06:09 20:02	07:11 17:45	08:14 15:44
29	08:20 16:39		05:57 19:47	05:57 19:47	05:37 20:51	04:39 21:48	04:48 22:10	05:10 21:34	06:11 20:22	06:11 20:00	07:13 17:43	08:16 15:42
30	08:19 16:41		05:54 19:49	05:54 19:49	05:35 20:53	04:38 21:50	04:49 22:10	05:12 21:32	06:13 20:19	06:13 20:00	07:15 17:41	08:18 15:40
31	08:17 16:43		05:51 19:51	05:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17	06:15 20:00	07:20 16:38	08:21 15:37
Potential sun hours	235	266	366		426	508	529	529	469	385	324	247
Total, worst case		239	19							263		216
Sun reduction		0.20	0.41							0.26		
Oper. time red.		0.98	0.98							0.98		
Wind dir. red.		0.62	0.62							0.62		
Total reduction		0.12	0.25							0.16		
Total, real		29	5							42		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Bajari - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (22)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
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6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
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11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
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18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	05:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
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31	08:17 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Biksti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (38)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54		08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:17 21:26	06:19 20:11	07:19 18:51	23	08:24 15:44
3	08:50 15:50	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	22	08:23 15:43
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14	08:42 16:08	07:47 17:14	06:54 18:15	06:14 19:59	05:04 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19		08:43 15:38
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20	08:35 16:20	07:33 17:28	06:54 18:28	05:59 19:59	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04		08:48 15:38
21	08:33 16:22	07:31 17:30	06:54 18:30	05:57 19:59	04:51 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02		08:49 15:39
22	08:32 16:24	07:28 17:32	06:54 18:32	05:54 19:59	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59		08:49 15:39
23	08:30 16:26	07:26 17:34	06:54 18:34	05:52 19:59	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	17:59	09:08 (B1)	08:09 15:55
24	08:29 16:28	07:23 17:37	06:54 18:36	05:49 19:59	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	10	09:18 (B1) 08:04 (B1) 15:53
25	08:27 16:30	07:21 17:39	06:54 18:38	05:47 19:59	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	14	09:20 (B1) 08:04 (B1) 15:53
26	08:26 16:32	07:18 17:41	06:54 18:41	05:44 19:59	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:30	07:07 19:07	08:09 17:50	17	09:21 (B1) 08:03 (B1) 15:52
27	08:24 16:34	07:16 17:43	06:54 18:43	05:42 19:59	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:47	20	09:22 (B1) 08:02 (B1) 15:51
28	08:22 16:36	07:13 17:45	06:54 18:45	05:39 19:59	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:45	21	09:23 (B1) 08:01 (B1) 15:49
29	08:20 16:39	07:11 17:46	06:54 18:46	05:37 19:59	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 19:01	08:16 17:46	22	09:24 (B1) 08:01 (B1) 15:48
30	08:19 16:41	07:10 17:47	06:54 18:47	05:35 19:59	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 19:01	08:18 17:47	23	09:25 (B1) 08:01 (B1) 15:46
31	08:17 16:43	07:10 17:48	06:54 18:48	05:33 19:59	04:37 21:51	04:30 22:10	05:14 21:30	06:15 20:17	07:20 16:38	08:20 15:46	24	09:26 (B1) 08:01 (B1) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		308								174		
Sun reduction		0.20								0.26		
Oper. time red.		0.98								0.98		
Wind dir. red.		0.61								0.61		
Total reduction		0.12								0.15		
Total, real		37								27		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Birzes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (4)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:31 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Birzmaliešis - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (70)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	07:55 (B22) 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	07:57 (B22) 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:01 (B22) 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:05	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 16:04	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 16:02	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:10 17:48	06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:09 17:51	06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43	07:07 17:53	06:51 19:51	05:33 21:51	04:37 21:51	04:37 21:51	05:14 21:30	06:15 20:17	07:20 16:38	08:18 13	08:24 13	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		245								232	13	
Sun reduction		0.20								0.26	0.08	
Oper. time red.		0.98								0.98	0.98	
Wind dir. red.		0.62								0.62	0.62	
Total reduction		0.12								0.16	0.05	
Total, real		30								36	1	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Birznieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (176)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:43 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	05:00 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:11	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Birtzalas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (15)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:20 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:22 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:26 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:28 20:01	07:28 18:41	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:09	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:24	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:06 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 19:05	07:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:25	07:11 19:02	07:14 17:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:21 17:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Bisenieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (183)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	08:49 (B24)	07:11	06:49	05:33
	15:48	16:45	10:13 (B14)	17:48	19:53	20:55
2	08:50	08:13	08:49 (B24)	07:08	06:46	05:30
	15:49	16:48	10:13 (B14)	17:50	19:55	20:57
3	08:50	08:11	08:49 (B24)	07:06	06:43	05:28
	15:51	16:50	10:13 (B14)	17:52	19:57	21:00
4	08:50	08:09	08:50 (B24)	07:03	06:41	05:26
	15:52	16:52	10:13 (B14)	17:54	19:59	21:02
5	08:49	08:07	08:50 (B24)	07:01	06:38	05:23
	15:53	16:54	10:13 (B14)	17:56	20:01	21:04
6	08:49	08:05	08:50 (B24)	06:58	06:35	05:21
	15:55	16:56	10:12 (B14)	17:58	20:03	21:06
7	08:48	08:03	08:51 (B24)	06:55	06:33	05:19
	15:56	16:59	10:11 (B14)	18:01	20:06	21:08
8	08:48	09:42 (B14)	08:01	08:52 (B24)	06:53	06:30
	15:58	17:01	10:11 (B14)	18:03	20:08	21:10
9	08:47	09:40 (B14)	07:58	08:52 (B24)	06:50	06:28
	16:00	17:03	10:09 (B14)	18:05	20:10	21:12
10	08:46	09:39 (B14)	07:56	08:53 (B24)	06:47	06:25
	16:01	17:05	10:09 (B14)	18:07	20:12	21:14
11	08:45	09:38 (B14)	07:54	08:56 (B24)	06:45	06:22
	16:03	17:08	10:08 (B14)	18:09	20:14	21:16
12	08:44	09:37 (B14)	07:52	08:58 (B24)	06:42	06:20
	16:05	17:10	10:05 (B14)	18:11	20:16	21:18
13	08:43	09:36 (B14)	07:50	09:44 (B14)	06:40	06:17
	16:06	17:12	10:03 (B14)	18:13	20:18	21:20
14	08:42	09:36 (B14)	07:47	09:47 (B14)	06:37	06:15
	16:08	17:14	10:00 (B14)	18:15	20:20	21:22
15	08:41	09:35 (B14)	07:45	06:34	06:12	06:58 (B22)
	16:10	17:17	18:18	20:22	32	07:30 (B22)
16	08:40	09:34 (B14)	07:43	06:32	06:09	06:57 (B22)
	16:12	17:19	18:20	20:24	32	07:29 (B22)
17	08:39	09:35 (B14)	07:40	06:29	06:07	06:57 (B22)
	16:14	17:21	18:22	20:26	31	07:28 (B22)
18	08:37	09:34 (B14)	07:38	06:26	06:04	06:57 (B22)
	16:16	17:23	18:24	20:28	30	07:27 (B22)
19	08:36	09:33 (B14)	07:36	06:24	06:02	06:58 (B22)
	16:18	17:26	18:26	20:30	29	07:27 (B22)
20	08:35	09:33 (B14)	07:33	06:21	05:59	06:59 (B22)
	16:20	17:28	18:28	20:33	27	07:26 (B22)
21	08:33	09:33 (B14)	07:31	06:18	05:57	06:59 (B22)
	16:22	17:30	18:30	20:35	25	07:24 (B22)
22	08:32	09:32 (B14)	07:28	06:16	05:54	07:00 (B22)
	16:24	17:32	18:32	20:37	23	07:23 (B22)
23	08:30	09:32 (B14)	07:26	06:13	05:52	07:01 (B22)
	16:26	17:34	18:34	20:39	19	07:20 (B22)
24	08:29	09:33 (B14)	07:23	06:10	05:49	07:03 (B22)
	16:28	17:37	18:36	20:41	15	07:18 (B22)
25	08:27	09:00 (B24)	07:21	06:08	05:47	07:07 (B22)
	16:30	17:39	18:38	20:43	8	07:15 (B22)
26	08:26	08:58 (B24)	07:18	06:05	05:44	04:44
	16:32	17:41	18:41	20:45		21:43
27	08:24	08:56 (B24)	07:16	06:02	05:42	04:42
	16:34	17:43	18:43	20:47		21:45
28	08:22	08:54 (B24)	07:13	05:59	05:40	04:41
	16:37	17:45	18:45	20:49		21:47
29	08:20	08:52 (B24)		06:57	05:37	04:40
	16:39	10:13 (B14)		19:47	20:51	21:48
30	08:18	08:50 (B24)		06:54	05:35	04:38
	16:41	10:13 (B14)		19:49	20:53	21:50
31	08:17	08:50 (B24)		06:51		04:37
	16:43	10:14 (B14)		19:51		21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case	836	680			560	
Sun reduction	0.13	0.20			0.50	
Oper. time red.	0.98	0.98			0.98	
Wind dir. red.	0.60	0.60			0.66	
Total reduction	0.08	0.12			0.31	
Total, real	64	79		176		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Bisenieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (183)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	06:58 (B22) 07:29 (B22)	07:17 18:54	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	06:58 (B22) 07:28 (B22)	07:19 18:51	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	06:59 (B22) 07:27 (B22)	07:21 18:48	07:27 16:32
4	04:33 22:07	05:21 21:22	06:23 20:06	06:59 (B22) 07:26 (B22)	07:23 18:46	07:29 16:29
5	04:34 22:07	05:23 21:20	06:25 20:03	07:00 (B22) 07:25 (B22)	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	07:01 (B22) 07:23 (B22)	07:27 18:40	07:33 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	07:02 (B22) 07:20 (B22)	07:30 18:38	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:55	07:05 (B22) 07:17 (B22)	07:32 18:35	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:20 (B24) 09:44 (B14)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:21 (B24) 09:45 (B14)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:21 (B24) 09:44 (B14)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:21 (B24) 09:44 (B14)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:24 (B24) 09:45 (B14)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:26 (B24) 09:44 (B14)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:28 (B24) 09:44 (B14)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:31 (B24) 09:45 (B14)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:33 (B24) 09:44 (B14)
18	04:51 21:52	05:49 20:50	07:12 (B22) 07:22 (B22)	06:51 18:09	07:52 16:02	09:07 (B14) 09:45 (B14)
19	04:53 21:51	05:51 20:47	07:09 (B22) 07:24 (B22)	06:53 18:07	07:55 16:01	09:07 (B14) 09:44 (B14)
20	04:54 21:49	05:53 20:45	07:07 (B22) 07:26 (B22)	06:55 18:04	07:57 15:59	09:07 (B14) 09:44 (B14)
21	04:56 21:48	05:55 20:42	07:05 (B22) 07:28 (B22)	06:57 18:02	07:59 15:58	09:08 (B14) 09:43 (B14)
22	04:58 21:46	05:57 20:40	07:04 (B22) 07:29 (B22)	06:59 18:00	08:01 15:56	09:09 (B14) 09:44 (B14)
23	04:59 21:45	05:59 20:37	07:03 (B22) 07:30 (B22)	07:01 17:57	08:03 15:55	09:10 (B14) 09:43 (B14)
24	05:01 21:43	06:01 20:35	07:02 (B22) 07:30 (B22)	07:03 17:55	08:11 15:53	09:11 (B14) 09:43 (B14)
25	05:03 21:41	06:03 20:32	07:01 (B22) 07:31 (B22)	07:05 17:52	08:13 15:52	09:12 (B14) 09:42 (B14)
26	05:05 21:39	06:05 20:30	07:00 (B22) 07:31 (B22)	07:07 17:50	08:15 15:51	09:13 (B14) 09:41 (B14)
27	05:06 21:38	06:07 20:27	06:59 (B22) 07:30 (B22)	07:09 17:48	08:17 15:49	09:15 (B14) 09:42 (B14)
28	05:08 21:36	06:09 20:24	06:58 (B22) 07:30 (B22)	07:11 17:46	08:19 15:48	09:16 (B14) 09:41 (B14)
29	05:10 21:34	06:11 20:22	06:58 (B22) 07:30 (B22)	07:13 18:59	08:21 15:47	09:17 (B14) 09:40 (B14)
30	05:12 21:32	06:13 20:19	06:58 (B22) 07:30 (B22)	07:15 18:56	08:22 15:46	09:18 (B14) 09:40 (B14)
31	05:14 21:30	06:15 20:17	06:58 (B22) 07:30 (B22)	07:20 16:38	08:25 (B24) 09:38 (B14)	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		367	193	110	1365	56
Sun reduction		0.50	0.43	0.26	0.08	0.07
Oper. time red.		0.98	0.98	0.98	0.98	0.98
Wind dir. red.		0.66	0.66	0.60	0.60	0.61
Total reduction		0.31	0.27	0.15	0.05	0.04
Total, real		115	52	16	65	2

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Bisenieki 3 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (137)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45 58	08:45 (B24) 10:01 (B14) 17:48	07:11 19:53	05:33 20:55	04:36 21:53
2	08:50 15:49	08:13 16:48 62	08:43 (B24) 10:02 (B14) 17:50	07:08 19:55	05:30 20:57	04:35 21:54
3	08:50 15:51	08:11 16:50 64	08:42 (B24) 10:02 (B14) 17:52	07:06 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52 65	08:42 (B24) 10:03 (B14) 17:54	07:03 19:59	05:26 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54 65	08:42 (B24) 10:03 (B14) 17:56	07:01 20:01	05:23 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56 67	08:41 (B24) 10:03 (B14) 17:58	06:58 20:03	05:21 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59 65	08:42 (B24) 10:03 (B14) 18:01	06:55 20:06	05:19 21:08	04:30 22:00
8	08:48 15:58	08:01 17:01 65	08:42 (B24) 10:03 (B14) 18:03	06:53 20:08	05:17 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03 64	08:42 (B24) 10:02 (B14) 18:05	06:50 20:10	05:15 21:12	04:29 22:02
10	08:46 16:01	07:56 17:05 62	08:43 (B24) 10:02 (B14) 18:07	06:47 20:12	05:13 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08 60	08:44 (B24) 10:02 (B14) 18:09	06:45 20:14	05:11 21:16	04:27 22:04
12	08:44 16:05	07:52 17:10 57	08:44 (B24) 10:01 (B14) 18:11	06:42 20:16	05:09 21:18	04:27 22:05
13	08:43 16:06	07:50 17:12 54	08:45 (B24) 10:00 (B14) 18:13	06:40 20:18	05:07 21:20	04:26 22:06
14	08:42 16:08	07:47 17:14 48	08:46 (B24) 09:59 (B14) 18:15	06:37 20:20	05:05 21:22	04:26 22:07
15	08:41 16:10	07:45 17:17 41	08:49 (B24) 09:58 (B14) 18:18	06:34 20:22	05:03 21:24	04:26 22:07
16	08:40 16:12	07:43 09:33 (B14) 17:19	09:27 (B14) 09:56 (B14) 18:20	06:32 20:24	05:01 21:25	04:26 22:08
17	08:39 16:14	07:40 09:30 (B14) 17:21	06:29 09:29 (B14) 18:22	06:07 20:26	04:59 21:27	04:25 22:08
18	08:37 16:16	07:38 09:29 (B14) 17:23	06:26 09:31 (B14) 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	07:36 09:27 (B14) 17:26	06:24 09:34 (B14) 18:26	06:02 20:30	04:55 21:31	04:25 22:09
20	08:35 16:20	07:33 09:26 (B14) 17:28	06:21 09:59 (B14) 18:28	05:59 20:33	04:53 21:33	04:25 22:10
21	08:33 16:22	07:31 09:25 (B14) 17:30	06:18 09:52 (B14) 17:30	05:57 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	07:28 09:24 (B14) 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10
23	08:30 16:26	07:26 09:23 (B14) 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 16:28	07:23 09:24 (B14) 17:37	06:10 09:54 (B14) 18:36	05:49 20:41	04:47 21:40	04:26 22:10
25	08:27 16:30	07:21 09:23 (B14) 17:39	06:08 18:38	05:47 20:43	04:45 21:42	04:26 22:10
26	08:26 16:32	07:18 09:22 (B14) 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34	07:16 09:22 (B14) 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 16:37	07:13 09:22 (B14) 17:45	05:59 18:45	05:40 20:49	04:41 21:47	04:28 22:10
29	08:20 16:39	07:11 08:52 (B24) 10:00 (B14)	05:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10
30	08:18 16:41	07:09 08:50 (B24) 10:01 (B14)	05:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09
31	08:17 16:43	07:07 08:48 (B24) 10:02 (B14)	05:51 19:51	05:33 20:55	04:37 21:51	04:29 22:09
Potential sun hours	235	266	366	426	508	529
Total, worst case	498	987		564		
Sun reduction	0.13	0.20		0.50		
Oper. time red.	0.98	0.98		0.98		
Wind dir. red.	0.60	0.60		0.66		
Total reduction	0.08	0.12		0.31		
Total, real	38	114		177		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Bisenieki 3 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (137)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	06:51 (B22) 18:54	07:17 16:36	08:12 (B24) 15:45
2	04:31 22:08	05:18 21:26	06:19 20:11	06:52 (B22) 18:51	07:19 16:34	08:11 (B24) 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	06:55 (B22) 18:48	07:21 16:32	08:12 (B24) 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:00 (B22) 18:46	07:23 16:29	08:11 (B24) 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:02 (B22) 18:43	07:25 16:27	08:11 (B24) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:12 (B24) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:12 (B24) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:13 (B24) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:14 (B24) 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:16 (B24) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:19 (B24) 15:39
12	04:42 22:00	05:37 21:04	07:05 (B22) 19:45	06:39 18:25	07:46 16:13	08:21 (B24) 15:38
13	04:43 21:59	05:39 21:02	07:00 (B22) 19:42	06:41 18:22	07:49 16:11	08:24 (B24) 15:38
14	04:45 21:58	05:41 20:59	06:57 (B22) 19:39	06:43 18:20	07:51 16:09	08:53 (B14) 15:38
15	04:46 21:57	05:43 20:57	06:56 (B22) 19:37	06:45 18:17	07:53 16:08	08:54 (B14) 15:38
16	04:48 21:55	05:45 20:54	06:54 (B22) 19:34	06:47 18:14	07:55 16:06	08:55 (B14) 15:38
17	04:49 21:54	05:47 20:52	06:53 (B22) 19:31	06:49 18:12	07:57 16:04	08:56 (B14) 15:38
18	04:51 21:52	05:49 20:50	06:51 (B22) 19:29	06:51 18:09	07:59 16:02	08:58 (B14) 15:38
19	04:53 21:51	05:51 20:47	06:51 (B22) 19:26	06:53 18:07	08:01 16:01	08:58 (B14) 15:38
20	04:54 21:49	05:53 20:45	06:50 (B22) 19:23	06:55 18:04	08:03 15:59	08:59 (B14) 15:39
21	04:56 21:48	05:55 20:42	06:49 (B22) 19:21	06:57 18:02	08:05 15:58	09:00 (B14) 15:39
22	04:58 21:46	05:57 20:40	06:49 (B22) 19:18	06:59 18:00	08:07 15:56	09:02 (B14) 15:40
23	04:59 21:45	05:59 20:37	06:49 (B22) 19:15	07:01 17:57	08:09 15:55	09:04 (B14) 15:40
24	05:01 21:43	06:01 20:35	06:48 (B22) 19:12	07:03 17:55	08:11 15:53	09:06 (B14) 15:41
25	05:03 21:41	06:03 20:32	06:48 (B22) 19:10	07:05 16:52	08:13 15:52	09:08 (B14) 15:41
26	05:05 21:39	06:05 20:30	06:48 (B22) 19:07	07:07 16:50	08:15 15:51	09:11 (B14) 15:42
27	05:06 21:38	06:07 20:27	06:47 (B22) 19:04	07:09 16:48	08:17 15:49	09:19 (B14) 15:43
28	05:08 21:36	06:09 20:24	06:48 (B22) 19:02	07:11 16:45	08:19 15:48	09:22 (B14) 15:44
29	05:10 21:34	06:11 20:22	06:48 (B22) 18:59	07:13 16:43	08:21 15:47	09:24 (B14) 15:45
30	05:12 21:32	06:13 20:19	06:49 (B22) 18:56	07:15 16:41	08:22 15:46	09:26 (B14) 15:46
31	05:14 21:30	06:15 20:17	06:50 (B22) 18:54	07:17 16:38	08:24 15:45	09:28 (B14) 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		517	56	364	1136	
Sun reduction		0.50	0.43	0.26	0.08	
Oper. time red.		0.98	0.98	0.98	0.98	
Wind dir. red.		0.66	0.66	0.60	0.60	
Total reduction		0.31	0.27	0.15	0.05	
Total, real		162	15	54	54	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Bites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (73)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:04	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Brivares - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (21)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:24 18:46	07:29 16:29	08:29 15:42
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Berzkalnes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (195)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:49 19:53	05:32 20:55	04:36 21:52	04:30 22:09	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
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25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:18 15:48	08:50 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Caunes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (119)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Cerini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (69)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	06:51 (B14) 18:54	07:17 16:36	07:23 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	06:51 (B14) 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	06:51 (B14) 18:48	07:21 16:32	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	06:53 (B14) 18:46	07:23 16:30	07:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	06:55 (B14) 18:43	07:26 16:27	07:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	06:57 (B14) 18:40	07:28 16:25	07:33 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	06:58 (B14) 18:38	07:30 16:23	07:36 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:04 (B14) 18:35	07:32 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:03	07:52 17:08	06:42 18:09	06:20 20:14	05:09 21:16	04:27 22:04	04:42 22:01	05:37 21:06	06:39 19:48	07:40 18:27	07:46 16:15	08:40 15:39
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:49 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:00 (B14) 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	06:57 (B14) 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	06:56 (B14) 19:10	08:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	06:54 (B14) 19:07	08:09 17:10	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:07 21:38	06:07 20:27	06:53 (B14) 19:04	08:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	06:52 (B14) 19:02	08:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 18:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	06:51 (B14) 18:59	08:15 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:09 17:49	05:54 18:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	06:51 (B14) 18:56	08:16 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:07 17:51	05:52 18:51	05:32 20:53	04:37 21:51	04:28 22:10	05:14 20:17	06:15 20:17	06:51 (B14) 18:56	08:17 16:38	08:23 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case				290				176	116			
Sun reduction				0.50				0.50	0.43			
Oper. time red.				0.98				0.98	0.98			
Wind dir. red.				0.66				0.66	0.66			
Total reduction				0.32				0.32	0.28			
Total, real				93				57	32			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Cuculi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (169)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

January			February			March			April			May			June		
1	08:51		09:57 (B14)	08:15	07:11				06:49		07:55 (B22)	05:33	04:36				
	15:48	32	10:29 (B14)	16:45	17:48				19:53	20	08:15 (B22)	20:55	21:53				
2	08:50		09:58 (B14)	08:13	07:08				06:46		07:57 (B22)	05:30	04:35				
	15:49	32	10:30 (B14)	16:48	17:50				19:55	15	08:12 (B22)	20:58	21:54				
3	08:50		09:58 (B14)	08:11	07:06				06:43		08:01 (B22)	05:28	04:34				
	15:51	32	10:30 (B14)	16:50	17:52				19:57	8	08:09 (B22)	21:00	21:55				
4	08:50		09:58 (B14)	08:09	07:03				06:41			05:26	04:33				
	15:52	32	10:30 (B14)	16:52	17:54				19:59			21:02	21:57				
5	08:49		09:59 (B14)	08:07	07:01				06:38			05:23	04:32				
	15:53	32	10:31 (B14)	16:54	17:56				20:01			21:04	21:58				
6	08:49		09:59 (B14)	08:05	06:58				06:35			05:21	04:31				
	15:55	33	10:32 (B14)	16:56	17:58				20:03			21:06	21:59				
7	08:48		09:59 (B14)	08:03	06:55				06:33			05:19	04:30				
	15:56	33	10:32 (B14)	16:59	18:01				20:06			21:08	22:00				
8	08:48		10:00 (B14)	08:01	06:53				06:30			05:17	04:29				
	15:58	33	10:33 (B14)	17:01	18:03				20:08			21:10	22:01				
9	08:47		10:00 (B14)	07:58	06:50				06:28			05:15	04:29				
	16:00	33	10:33 (B14)	17:03	18:05				20:10			21:12	22:02				
10	08:46		10:01 (B14)	07:56	06:47				06:25			05:13	04:28				
	16:01	33	10:34 (B14)	17:05	18:07				20:12			21:14	22:03				
11	08:45		10:01 (B14)	07:54	06:45				06:22			05:11	04:27				
	16:03	33	10:34 (B14)	17:08	18:09				20:14			21:16	22:04				
12	08:44		10:02 (B14)	07:52	06:42				06:20			05:09	04:27				
	16:05	33	10:35 (B14)	17:10	18:11				20:16			21:18	22:05				
13	08:43		10:01 (B14)	07:50	06:40				06:17			05:07	04:26				
	16:06	33	10:34 (B14)	17:12	18:13				20:18			21:20	22:06				
14	08:42		10:02 (B14)	07:47	06:37				06:15			05:05	04:26				
	16:08	33	10:35 (B14)	17:14	18:15				20:20			21:22	22:07				
15	08:41		10:02 (B14)	07:45	06:34			07:06 (B22)	06:12			05:03	04:26				
	16:10	33	10:35 (B14)	17:17	18:18	10	07:16 (B22)	20:22	21:24			22:07					
16	08:40		10:03 (B14)	07:43	06:32		07:02 (B22)	06:09	05:01			04:26					
	16:12	32	10:35 (B14)	17:19	18:20	17	07:19 (B22)	20:24	21:25			22:08					
17	08:39		10:04 (B14)	07:40	06:29		06:59 (B22)	06:07	04:59			04:25					
	16:14	32	10:36 (B14)	17:21	18:22	21	07:20 (B22)	20:26	21:27			22:08					
18	08:38		10:04 (B14)	07:38	06:26		06:57 (B22)	06:04	04:57			04:25					
	16:16	32	10:36 (B14)	17:23	18:24	24	07:21 (B22)	20:28	21:29			22:09					
19	08:36		10:05 (B14)	07:36	06:24		06:57 (B22)	06:02	04:55			04:25					
	16:18	30	10:35 (B14)	17:26	18:26	26	07:23 (B22)	20:30	21:31			22:09					
20	08:35		10:06 (B14)	07:33	06:21		06:55 (B22)	05:59	04:53			04:25					
	16:20	30	10:36 (B14)	17:28	18:28	28	07:23 (B22)	20:33	21:33			22:10					
21	08:33		10:06 (B14)	07:31	06:18		06:54 (B22)	05:57	04:52			04:25					
	16:22	29	10:35 (B14)	17:30	18:30	29	07:23 (B22)	20:35	21:35			22:10					
22	08:32		10:07 (B14)	07:28	06:16		06:54 (B22)	05:54	04:50			04:26					
	16:24	28	10:35 (B14)	17:32	18:32	30	07:24 (B22)	20:37	21:37			22:10					
23	08:30		10:08 (B14)	07:26	06:13		06:53 (B22)	05:52	04:48			04:26					
	16:26	26	10:34 (B14)	17:34	18:34	31	07:24 (B22)	20:39	21:38			22:10					
24	08:29		10:10 (B14)	07:23	06:10		06:52 (B22)	05:49	04:47			04:26					
	16:28	24	10:34 (B14)	17:37	18:36	31	07:23 (B22)	20:41	21:40			22:10					
25	08:27		10:11 (B14)	07:21	06:08		06:52 (B22)	05:47	04:45			04:26					
	16:30	22	10:33 (B14)	17:39	18:38	32	07:24 (B22)	20:43	21:42			22:10					
26	08:26		10:12 (B14)	07:18	06:05		06:52 (B22)	05:44	04:44			04:27					
	16:32	20	10:32 (B14)	17:41	18:41	31	07:23 (B22)	20:45	21:43			22:10					
27	08:24		10:14 (B14)	07:16	06:02		06:52 (B22)	05:42	04:42			04:27					
	16:34	17	10:31 (B14)	17:43	18:43	30	07:22 (B22)	20:47	21:45			22:10					
28	08:22		10:17 (B14)	07:13	05:59		06:52 (B22)	05:40	04:41			04:28					
	16:37	12	10:29 (B14)	17:45	18:45	30	07:22 (B22)	20:49	21:47			22:10					
29	08:20				06:57		07:53 (B22)	05:37	04:40			04:29					
	16:39				19:47	27	08:20 (B22)	20:51	21:48			22:10					
30	08:19				06:54		07:53 (B22)	05:35	04:38			04:29					
	16:41				19:49	26	08:19 (B22)	20:53	21:50			22:09					
31	08:17				06:51		07:54 (B22)		04:37								
	16:43				19:51	24	08:18 (B22)		21:51								
Potential sun hours	235			266	366			426				508	529				
Total, worst case	824				447				43								
Sun reduction	0.13				0.41				0.50								
Oper. time red.	0.98				0.98				0.98								
Wind dir. red.	0.61				0.64				0.64								
Total reduction	0.08				0.25				0.31								
Total, real	65				113				13								

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Cuculi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (169)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45 33
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44 33
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43 33
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42 33
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42 32
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41 33
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40 33
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40 32
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39 32
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39 32
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39 32
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38 31
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38 31
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38 31
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38 30
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38 31
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38 30
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:47 15:38 30
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:48 15:38 30
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:49 15:39 30
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:50 15:39 30
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:51 15:39 30
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:52 15:40 30
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:53 15:41 29
25	05:03 21:41	06:03 20:32	07:05 19:10	08:13 16:52	08:19 15:52	08:54 15:41 30
26	05:05 21:39	06:05 20:30	07:07 19:07	08:15 16:50	08:21 15:51	08:55 15:42 30
27	05:06 21:38	06:07 20:27	07:09 19:04	08:17 16:48	08:23 15:49	08:56 15:43 31
28	05:08 21:36	06:09 20:24	07:11 19:02	08:19 16:45	08:25 15:48	08:57 15:44 30
29	05:10 21:34	06:11 20:22	07:13 18:59	08:21 16:43	08:27 15:47	08:58 15:45 31
30	05:12 21:32	06:13 20:19	07:15 18:56	08:23 16:41	08:29 15:46	08:59 15:46 31
31	05:14 21:30	06:15 20:17		08:25 16:38		09:00 15:47 32
Potential sun hours	529	469	385	324	247	216
Total, worst case			498		470	966
Sun reduction			0.43		0.08	0.07
Oper. time red.			0.98		0.98	0.98
Wind dir. red.			0.64		0.61	0.61
Total reduction			0.26		0.05	0.04
Total, real			131		23	40

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Daugavas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (30)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:28 15:44
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:12	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	05:00 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Dimanti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (145)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	05:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
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29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Dravnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (104)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:26 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Druvas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (47)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	07:12 (B1) 21:53
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	07:15 (B1) 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:24 (B1) 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	07:18 (B1) 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	07:16 (B1) 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:00	06:33 20:05	07:13 (B1) 21:08	04:30 22:00
8	08:48 15:58	08:00 17:01	06:53 18:03	07:18 (B4) 20:08	06:30 20:10	05:17 21:10
9	08:47 15:59	07:58 17:03	06:50 18:05	07:16 (B4) 20:10	06:27 20:12	05:15 21:12
10	08:46 16:01	07:56 17:05	06:47 18:07	07:13 (B4) 20:12	06:25 20:14	05:12 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	07:10 (B4) 20:14	06:22 20:16	05:10 21:16
12	08:44 16:04	07:52 17:10	06:42 18:11	07:08 (B4) 20:16	06:20 20:18	05:08 21:18
13	08:43 16:06	07:49 17:12	06:39 18:13	07:09 (B4) 20:18	06:17 20:20	05:06 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	07:08 (B4) 20:20	06:14 20:22	05:04 21:22
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16	08:40 16:12	07:43 17:19	06:32 18:20	07:08 (B4) 20:24	06:09 20:26	05:01 21:25
17	08:39 16:14	07:40 17:21	06:29 18:22	07:08 (B4) 20:26	06:07 20:28	04:59 21:27
18	08:37 16:16	07:38 17:23	06:26 18:24	07:08 (B4) 20:28	06:04 20:30	04:57 21:29
19	08:36 16:18	07:35 17:25	06:23 18:26	07:10 (B4) 20:30	06:02 20:32	04:55 21:31
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21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	07:03 (B1) 21:35	04:52 21:35
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	07:03 (B1) 21:37	04:50 21:37
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	07:06 (B1) 21:45	04:42 21:45
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	07:07 (B1) 21:47	04:41 21:47
29	08:20 16:39		06:57 19:47	05:37 20:51	07:09 (B1) 21:48	04:39 21:48
30	08:18 16:41		06:54 19:49	05:35 20:53	07:09 (B1) 21:50	04:38 21:50
31	08:17 16:43		06:51 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case			214	885		26
Sun reduction			0.41	0.50		0.57
Oper. time red.			0.98	0.98		0.98
Wind dir. red.			0.62	0.66		0.66
Total reduction			0.25	0.32		0.37
Total, real			54	285		9

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Druvas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (47)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:06 (B1)	07:17	07:48 (B4)
	22:09	21:28	20:14	18:54	18:09 (B4)	16:36
2	04:31	05:17	06:19	07:07 (B1)	07:19	07:48 (B4)
	22:09	21:26	20:11	18:51	18:08 (B4)	16:34
3	04:32	05:19	06:21	07:08 (B1)	07:21	07:50 (B4)
	22:08	21:24	20:09	18:48	18:07 (B4)	16:31
4	04:33	05:21	06:23	07:09 (B1)	07:23	07:52 (B4)
	22:07	21:22	20:06	18:46	18:05 (B4)	16:29
5	04:33	05:23	06:25	07:09 (B1)	07:25	07:54 (B4)
	22:07	21:19	20:03	18:43	18:03 (B4)	16:27
6	04:35	05:25	06:27	07:11 (B1)	07:27	07:56 (B4)
	22:06	21:17	20:01	18:40	18:02 (B4)	16:25
7	04:36	05:27	06:29	07:13 (B1)	07:29	07:58 (B4)
	22:05	21:15	19:58	18:38	18:01 (B4)	16:23
8	04:37	05:29	06:31	07:17 (B1)	07:32	07:58 (B4)
	22:04	21:13	19:55	18:35	18:00 (B4)	16:21
9	04:38	05:31	06:33	07:19 (B1)	07:34	07:59 (B4)
	22:03	21:11	19:53	18:32	18:00 (B4)	16:19
10	04:39	05:33	06:35	07:21 (B1)	07:36	07:59 (B4)
	22:02	21:08	19:50	18:30	18:00 (B4)	16:17
11	04:41	05:35	06:37	07:23 (B1)	07:38	07:59 (B4)
	22:01	21:06	19:47	18:27	18:00 (B4)	16:15
12	04:42	05:37	06:39	07:25 (B1)	07:40	07:59 (B4)
	22:00	21:04	19:45	18:25	18:00 (B4)	16:13
13	04:43	05:39	06:41	07:27 (B1)	07:42	07:59 (B4)
	21:59	21:01	19:42	18:22	18:00 (B4)	16:11
14	04:45	05:41	06:43	07:29 (B1)	07:44	07:59 (B4)
	21:58	20:59	19:39	18:19	18:00 (B4)	16:09
15	04:46	05:43	06:45	07:31 (B1)	07:46	07:59 (B4)
	21:57	20:57	19:37	18:17	18:00 (B4)	16:07
16	04:48	05:45	06:47	07:33 (B1)	07:48	07:59 (B4)
	21:55	20:54	19:34	18:14	18:00 (B4)	16:06
17	04:49	05:47	06:49	07:35 (B1)	07:50	07:59 (B4)
	21:54	20:52	19:31	18:12	18:00 (B4)	16:04
18	04:51	05:49	06:51	07:37 (B1)	07:52	07:59 (B4)
	21:52	20:50	19:29	18:09	18:00 (B4)	16:02
19	04:52	05:51	06:53	07:39 (B1)	07:55	07:59 (B4)
	21:51	20:47	19:26	18:07	18:00 (B4)	16:01
20	04:54	05:53	06:55	07:41 (B1)	07:57	07:59 (B4)
	21:49	20:45	19:23	18:04	18:00 (B4)	15:59
21	04:56	05:55	06:57	07:43 (B1)	07:59	07:59 (B4)
	21:48	20:42	19:20	18:02	18:00 (B4)	15:58
22	04:57	05:57	06:59	07:45 (B1)	08:01	07:59 (B4)
	21:46	20:40	19:18	17:59	18:00 (B4)	15:56
23	04:59	05:59	07:01	07:47 (B1)	08:03	07:59 (B4)
	21:45	20:37	19:15	17:57	18:00 (B4)	15:55
24	05:01	06:01	07:03	07:49 (B1)	08:05	07:59 (B4)
	21:43	20:35	19:12	17:55	18:00 (B4)	15:53
25	05:03	06:03	07:05	07:51 (B1)	08:07	07:59 (B4)
	21:41	20:32	19:10	17:52	18:00 (B4)	15:52
26	05:04	06:05	07:07	07:53 (B1)	08:09	07:59 (B4)
	21:39	20:29	19:07	17:50	18:00 (B4)	15:51
27	05:06	06:07	07:09	07:55 (B1)	08:11	07:59 (B4)
	21:38	20:27	19:04	17:47	18:00 (B4)	15:49
28	05:08	06:09	07:11	07:57 (B1)	08:13	07:59 (B4)
	21:36	20:24	19:02	17:44	18:00 (B4)	15:48
29	05:10	06:11	07:13	07:59 (B1)	08:15	07:59 (B4)
	21:34	20:22	18:59	17:41	18:00 (B4)	15:47
30	05:12	06:13	07:15	08:01 (B1)	08:17	07:59 (B4)
	21:32	20:19	18:56	17:38	18:00 (B4)	15:46
31	05:14	06:15	07:17	08:03 (B1)	08:19	07:59 (B4)
	21:30	20:17	18:53	17:35	18:00 (B4)	15:45
Potential sun hours	529	469	385	324	247	216
Total, worst case		717	348	82		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.64	0.62		
Total reduction		0.32	0.27	0.16		
Total, real		230	94	13		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Dzelmēs - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (129)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Dzintari - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (62)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Dzervites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (204)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:04	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:58	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:45
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Darzupites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (58)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	09:38 (B22) 10:18 (B22)	07:11 17:48	06:49 19:53	05:33 20:55
2	08:50 15:49	08:13 16:47	09:38 (B22) 10:19 (B22)	07:08 17:50	06:46 19:55	21:53 20:57
3	08:50 15:51	08:11 16:50	09:39 (B22) 10:19 (B22)	07:06 17:52	06:43 19:57	20:58 21:00
4	08:50 15:52	08:09 16:52	09:39 (B22) 10:19 (B22)	07:03 17:54	06:41 19:59	20:56 21:02
5	08:49 15:53	08:07 16:54	09:40 (B22) 10:19 (B22)	07:00 17:56	06:38 20:01	20:53 21:04
6	08:49 15:55	08:05 16:56	09:40 (B22) 10:18 (B22)	06:58 17:58	06:35 20:03	20:51 21:06
7	08:48 15:56	08:03 16:59	09:41 (B22) 10:18 (B22)	06:55 18:00	06:33 20:05	20:59 21:08
8	08:48 15:58	08:01 17:01	09:42 (B22) 10:17 (B22)	06:53 18:03	06:30 20:08	20:57 21:10
9	08:47 15:59	09:50 (B22) 09:53 (B22)	07:58 17:03	09:42 (B22) 10:16 (B22)	06:50 18:05	20:28 21:12
10	08:46 16:01	09:47 (B22) 09:57 (B22)	07:56 17:05	09:43 (B22) 10:15 (B22)	06:47 18:07	20:10 21:14
11	08:45 16:03	09:45 (B22) 10:00 (B22)	07:54 17:08	09:45 (B22) 10:14 (B22)	06:45 18:09	20:12 21:16
12	08:44 16:04	09:44 (B22) 10:02 (B22)	07:52 17:10	09:45 (B22) 10:12 (B22)	06:42 18:11	20:10 21:18
13	08:43 16:06	09:43 (B22) 10:03 (B22)	07:50 17:12	09:48 (B22) 10:11 (B22)	06:40 18:13	20:17 21:20
14	08:42 16:08	09:42 (B22) 10:05 (B22)	07:47 17:14	09:49 (B22) 10:08 (B22)	06:37 18:15	20:14 21:22
15	08:41 16:10	09:41 (B22) 10:06 (B22)	07:45 17:17	09:53 (B22) 10:05 (B22)	06:34 18:18	20:12 21:24
16	08:40 16:12	09:41 (B22) 10:08 (B22)	07:43 17:19	06:32 18:20	20:09 20:24	21:24 21:25
17	08:39 16:14	09:41 (B22) 10:09 (B22)	07:40 17:21	06:29 18:22	20:07 20:26	21:22 21:27
18	08:37 16:16	09:40 (B22) 10:10 (B22)	07:38 17:23	06:26 18:24	20:04 20:28	21:24 21:29
19	08:36 16:18	09:39 (B22) 10:11 (B22)	07:36 17:26	06:24 18:26	20:02 20:30	21:26 21:31
20	08:35 16:20	09:39 (B22) 10:13 (B22)	07:33 17:28	06:21 18:28	20:09 20:33	21:28 21:33
21	08:33 16:22	09:39 (B22) 10:13 (B22)	07:31 17:30	06:18 18:30	20:07 20:35	21:30 21:35
22	08:32 16:24	09:38 (B22) 10:14 (B22)	07:28 17:32	06:16 18:32	20:05 20:37	21:32 21:37
23	08:30 16:26	09:38 (B22) 10:14 (B22)	07:26 17:34	06:13 18:34	20:02 20:39	21:34 21:38
24	08:29 16:28	09:38 (B22) 10:16 (B22)	07:23 17:37	06:10 18:36	20:09 20:41	21:40 21:40
25	08:27 16:30	09:38 (B22) 10:17 (B22)	07:21 17:39	06:07 18:38	20:07 20:43	21:42 21:42
26	08:26 16:32	09:38 (B22) 10:17 (B22)	07:18 17:41	06:05 18:41	20:05 20:45	21:44 21:43
27	08:24 16:34	09:38 (B22) 10:18 (B22)	07:16 17:43	06:02 18:43	20:02 20:47	21:42 21:45
28	08:22 16:36	09:38 (B22) 10:18 (B22)	07:13 17:45	05:59 18:45	20:00 20:49	21:43 21:47
29	08:20 16:39	09:38 (B22) 10:18 (B22)		06:57 19:47	20:37 20:51	21:40 21:48
30	08:18 16:41	09:38 (B22) 10:19 (B22)		06:54 19:49	20:35 20:53	21:46 21:50
31	08:17 16:43	09:38 (B22) 10:19 (B22)		06:51 19:51	20:37 20:51	21:47 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case	689	486				
Sun reduction	0.13	0.20				
Oper. time red.	0.98	0.98				
Wind dir. red.	0.61	0.61				
Total reduction	0.08	0.12				
Total, real	55	58				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Darzupites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (58)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	09:12 (B22) 09:45 (B22)
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	09:11 (B22) 09:46 (B22)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	09:11 (B22) 09:47 (B22)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	09:10 (B22) 09:47 (B22)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	09:09 (B22) 09:48 (B22)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	09:09 (B22) 09:49 (B22)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	09:09 (B22) 09:49 (B22)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	09:09 (B22) 09:50 (B22)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	09:09 (B22) 09:49 (B22)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	09:09 (B22) 09:50 (B22)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	09:09 (B22) 09:50 (B22)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	09:09 (B22) 09:50 (B22)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	09:10 (B22) 09:50 (B22)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	09:10 (B22) 09:50 (B22)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	09:10 (B22) 09:49 (B22)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	09:11 (B22) 09:50 (B22)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	09:11 (B22) 09:49 (B22)
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	09:12 (B22) 09:50 (B22)
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	09:13 (B22) 09:49 (B22)
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	09:13 (B22) 09:49 (B22)
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	09:14 (B22) 09:48 (B22)
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	09:15 (B22) 09:49 (B22)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	09:16 (B22) 09:48 (B22)
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	09:17 (B22) 09:47 (B22)
25	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	09:18 (B22) 09:47 (B22)
26	05:04 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	09:19 (B22) 09:46 (B22)
27	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	09:21 (B22) 09:46 (B22)
28	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	09:22 (B22) 09:45 (B22)
29	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	09:24 (B22) 09:44 (B22)
30	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	09:25 (B22) 09:43 (B22)
31	05:14 21:30	06:15 20:17		07:20 16:38	09:13 (B22) 09:43 (B22)	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case				114	1042	30
Sun reduction				0.26	0.08	0.07
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.61	0.61	0.61
Total reduction				0.15	0.05	0.04
Total, real				18	51	1

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Elkš ni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (77)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
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16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:09	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
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23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
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29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ezeravoti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (50)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
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2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
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20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:31 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ezerkrasts - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (202)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
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5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
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12	08:44 16:05	07:51 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
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15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:52 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:47	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
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27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:50	08:50 15:43
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29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ezermali - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (26)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:58	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:34 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:34 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
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15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
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28	08:22 16:36	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ezermuiža - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (221)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:43
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:24 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:46 16:00	07:58 17:03	06:50 18:05	06:28 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
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20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:54 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:26 22:10	04:56 21:47	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:50	08:50 15:43
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31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ezerkikaukas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (110)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:31 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Galvani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (105)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April	May	June
1	08:51		10:16 (B1)	08:15		07:11				06:49	05:32	04:36
	15:48	23	10:39 (B1)	16:45		17:47				19:53	20:55	21:53
2	08:51		10:18 (B1)	08:13		07:08				06:46	05:30	04:34
	15:49	21	10:39 (B1)	16:47		17:50				19:55	20:57	21:54
3	08:50		10:18 (B1)	08:11		07:06		07:35 (B17)	06:43	05:28	04:33	
	15:50	21	10:39 (B1)	16:50		17:52	10	07:45 (B17)	19:57	21:00	21:55	
4	08:50		10:18 (B1)	08:09		07:03		07:31 (B17)	06:41	05:25	04:32	
	15:52	21	10:39 (B1)	16:52		17:54	17	07:48 (B17)	19:59	21:02	21:57	
5	08:49		10:20 (B1)	08:07		07:00		07:29 (B17)	06:38	05:23	04:31	
	15:53	20	10:40 (B1)	16:54		17:56	20	07:49 (B17)	20:01	21:04	21:58	
6	08:49		10:21 (B1)	08:05		06:58		07:28 (B17)	06:35	05:21	04:31	
	15:55	18	10:39 (B1)	16:56		17:58	23	07:51 (B17)	20:03	21:06	21:59	
7	08:48		10:21 (B1)	08:03		06:55		07:26 (B17)	06:33	05:19	04:30	
	15:56	18	10:39 (B1)	16:58		18:00	25	07:51 (B17)	20:05	21:08	22:00	
8	08:48		10:22 (B1)	08:01		06:53		07:25 (B17)	06:30	05:17	04:29	
	15:58	17	10:39 (B1)	17:01		18:03	27	07:52 (B17)	20:08	21:10	22:01	
9	08:47		10:24 (B1)	07:58		06:50		07:25 (B17)	06:27	05:15	04:28	
	15:59	15	10:39 (B1)	17:03		18:05	28	07:53 (B17)	20:10	21:12	22:02	
10	08:46		10:25 (B1)	07:56		06:47		07:24 (B17)	06:25	05:12	04:28	
	16:01	13	10:38 (B1)	17:05		18:07	28	07:52 (B17)	20:12	21:14	22:03	
11	08:45		10:27 (B1)	07:54		06:45		07:23 (B17)	06:22	05:10	04:27	
	16:03	10	10:37 (B1)	17:07		18:09	29	07:52 (B17)	20:14	21:16	22:04	
12	08:44		10:30 (B1)	07:52		06:42		07:24 (B17)	06:20	05:08	04:27	
	16:04	5	10:35 (B1)	17:10		18:11	28	07:52 (B17)	20:16	21:18	22:05	
13	08:43			07:49		06:39		07:23 (B17)	06:17	05:06	04:26	
	16:06			17:12		18:13	29	07:52 (B17)	20:18	21:20	22:06	
14	08:42			07:47		06:37		07:23 (B17)	06:14	05:04	04:26	
	16:08			17:14		18:15	28	07:51 (B17)	20:20	21:22	22:07	
15	08:41			07:45		06:34		07:23 (B17)	06:12	05:02	04:25	
	16:10			17:16		18:17	26	07:49 (B17)	20:22	21:24	22:07	
16	08:40			07:43		06:31		07:24 (B17)	06:09	05:00	04:25	
	16:12			17:19		18:20	25	07:49 (B17)	20:24	21:26	22:08	
17	08:39			07:40		06:29		07:25 (B17)	06:07	04:59	04:25	
	16:14			17:21		18:22	22	07:47 (B17)	20:26	21:27	22:09	
18	08:38			07:38		06:26		07:26 (B17)	06:04	04:57	04:25	
	16:15			17:23		18:24	19	07:45 (B17)	20:28	21:29	22:09	
19	08:36			07:35		06:23		07:28 (B17)	06:02	04:55	04:25	
	16:17			17:25		18:26	16	07:44 (B17)	20:30	21:31	22:09	
20	08:35			07:33		06:21		07:30 (B17)	05:59	04:53	04:25	
	16:19			17:28		18:28	10	07:40 (B17)	20:33	21:33	22:10	
21	08:33			07:31		06:18			05:57	04:51	04:25	
	16:21			17:30		18:30			20:35	21:35	22:10	
22	08:32			07:28		06:15			05:54	04:50	04:25	
	16:24			17:32		18:32			20:37	21:37	22:10	
23	08:30			07:26		06:13			05:52	04:48	04:25	
	16:26			17:34		18:34			20:39	21:38	22:10	
24	08:29			07:23		06:10			05:49	04:47	04:26	
	16:28			17:36		18:36			20:41	21:40	22:11	
25	08:27			07:21		06:07			05:47	04:45	04:26	
	16:30			17:39		18:38			20:43	21:42	22:11	
26	08:26			07:18		06:05			05:44	04:43	04:27	
	16:32			17:41		18:40			20:45	21:43	22:10	
27	08:24			07:16		06:02			05:42	04:42	04:27	
	16:34			17:43		18:43			20:47	21:45	22:10	
28	08:22			07:13		05:59			05:39	04:41	04:28	
	16:36			17:45		18:45			20:49	21:47	22:10	
29	08:20					06:57			05:37	04:39	04:28	
	16:38					19:47			20:51	21:48	22:10	
30	08:19					06:54			05:35	04:38	04:29	
	16:41					19:49			20:53	21:50	22:09	
31	08:17					06:51				04:37		
	16:43					19:51				21:51		
Potential sun hours	235			266		366			426	508	529	
Total, worst case		202				410						
Sun reduction		0.13				0.41						
Oper. time red.		0.98				0.98						
Wind dir. red.		0.61				0.62						
Total reduction		0.08				0.25						
Total, real		16				102						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Galvani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (105)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:15	06:17	07:17	08:03 (B17)	07:23
	22:09	21:28	20:14	18:54	28 08:31 (B17)	16:36
2	04:31	05:17	06:19	07:19	08:02 (B17)	07:25
	22:09	21:26	20:11	18:51	29 08:31 (B17)	16:34
3	04:31	05:19	06:21	07:21	08:02 (B17)	07:27
	22:08	21:24	20:09	18:48	28 08:30 (B17)	16:31
4	04:32	05:21	06:23	07:23	08:02 (B17)	07:29
	22:07	21:22	20:06	18:46	28 08:30 (B17)	16:29
5	04:33	05:23	06:25	07:25	08:02 (B17)	07:31
	22:07	21:20	20:03	18:43	27 08:29 (B17)	16:27
6	04:34	05:25	06:27	07:27	08:02 (B17)	07:33
	22:06	21:17	20:01	18:40	26 08:28 (B17)	16:25
7	04:36	05:27	06:29	07:29	08:03 (B17)	07:36
	22:05	21:15	19:58	18:38	24 08:27 (B17)	16:23
8	04:37	05:29	06:31	07:32	08:04 (B17)	07:38
	22:04	21:13	19:55	18:35	21 08:25 (B17)	16:21
9	04:38	05:31	06:33	07:34	08:06 (B17)	07:40
	22:03	21:11	19:53	18:32	18 08:24 (B17)	16:19
10	04:39	05:33	06:35	07:36	08:08 (B17)	07:42
	22:02	21:08	19:50	18:30	13 08:21 (B17)	16:17
11	04:40	05:35	06:37	07:38	08:11 (B17)	07:44
	22:01	21:06	19:47	18:27	6 08:17 (B17)	16:15
12	04:42	05:37	06:39	07:40		07:46
	22:00	21:04	19:45	18:25		16:13
13	04:43	05:39	06:41	07:42		07:49
	21:59	21:02	19:42	18:22		16:11
14	04:45	05:41	06:43	07:44		07:51
	21:58	20:59	19:39	18:19		16:09
15	04:46	05:43	06:45	07:46		07:53
	21:57	20:57	19:37	18:17		16:07
16	04:48	05:45	06:47	07:48		07:55
	21:55	20:54	19:34	18:14		16:06
17	04:49	05:47	06:49	07:50		07:57
	21:54	20:52	19:31	18:12		16:04
18	04:51	05:49	06:51	07:52		07:59
	21:53	20:50	19:29	18:09		16:02
19	04:52	05:51	06:53	07:55		08:01
	21:51	20:47	19:26	18:07		16:01
20	04:54	05:53	06:55	07:57		08:03
	21:50	20:45	19:23	18:04		15:59
21	04:56	05:55	06:57	07:59		08:05
	21:48	20:42	19:20	18:02		15:57
22	04:57	05:57	06:59	08:01		08:07
	21:46	20:40	19:18	17:59		15:56
23	04:59	05:59	07:01	08:03		08:09
	21:45	20:37	19:15	6 08:22 (B17)		15:54
24	05:01	06:01	07:03	08:11 (B17)		08:11
	21:43	20:35	19:12	15 08:26 (B17)		15:53
25	05:02	06:03	07:05	08:09 (B17)		08:13
	21:41	20:32	19:10	19 08:28 (B17)		15:52
26	05:04	06:05	07:07	08:07 (B17)		08:15
	21:39	20:30	19:07	22 08:29 (B17)		15:50
27	05:06	06:07	07:09	08:07 (B17)		08:17
	21:38	20:27	19:04	24 08:31 (B17)		15:49
28	05:08	06:09	07:11	08:05 (B17)		08:19
	21:36	20:24	19:02	26 08:31 (B17)		15:48
29	05:10	06:11	07:13	08:04 (B17)		08:21
	21:34	20:22	18:59	27 08:31 (B17)		15:47
30	05:12	06:13	07:15	08:03 (B17)		08:22
	21:32	20:19	18:56	28 08:31 (B17)		15:46
31	05:14	06:15		07:20		08:51
	21:30	20:17		16:38		15:46
Potential sun hours	529	469	385	324	247	216
Total, worst case			167	248	5	669
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.62	0.62	0.61	0.61
Total reduction			0.26	0.16	0.05	0.04
Total, real			43	39	0	28

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Galvani 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (98)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	07:37 (B1) 19:53	06:49 20:55	05:32 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	08:15 (B1) 16:36	07:23 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	07:35 (B1) 19:55	06:46 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:17 20:11	06:19 18:51	08:13 (B1) 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	07:34 (B1) 19:57	06:43 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:19 20:09	06:21 18:48	08:11 (B1) 16:31	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	07:33 (B1) 19:59	06:41 21:02	05:26 21:57	04:33 22:07	04:32 21:22	05:21 20:06	06:23 18:46	08:10 (B1) 16:29	07:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	07:32 (B1) 20:01	06:38 21:04	05:23 21:58	04:32 22:07	04:33 21:20	05:23 20:03	06:25 18:43	08:09 (B1) 16:27	07:31 15:41
6	08:49 15:55	08:05 16:56	06:58 17:58	07:33 (B1) 20:03	06:35 21:06	05:21 21:59	04:31 22:06	04:35 21:17	05:25 20:01	06:27 18:40	08:08 (B1) 16:25	07:33 15:41
7	08:48 15:56	08:03 16:59	06:55 18:00	07:32 (B1) 20:05	06:33 21:08	05:19 22:00	04:30 22:05	04:36 21:15	05:27 19:58	06:29 18:38	08:08 (B1) 16:23	07:36 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	07:32 (B1) 20:08	06:30 21:10	05:17 22:01	04:29 22:04	04:37 21:13	05:29 19:55	06:31 18:35	08:08 (B1) 16:21	07:38 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	07:33 (B1) 20:10	06:27 21:12	05:15 22:02	04:28 22:03	04:38 21:11	05:31 19:53	06:33 18:32	08:08 (B1) 16:19	07:40 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	07:33 (B1) 20:12	06:25 21:14	05:13 22:03	04:28 22:02	04:39 21:08	05:33 19:50	06:35 18:30	08:08 (B1) 16:17	07:42 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	07:33 (B1) 20:14	06:22 21:16	05:10 22:04	04:27 22:01	04:41 21:06	05:35 19:47	06:37 18:27	08:09 (B1) 16:15	07:44 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	07:35 (B1) 20:16	06:20 21:18	05:08 22:05	04:27 22:00	04:42 21:04	05:37 19:45	06:39 18:25	08:09 (B1) 16:13	07:46 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	07:37 (B1) 20:18	06:17 21:20	05:06 22:06	04:26 21:59	04:43 21:02	05:39 19:42	06:41 18:22	08:11 (B1) 16:11	07:49 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	07:41 (B1) 20:20	06:14 21:22	05:04 22:07	04:26 21:58	04:45 20:59	05:41 19:39	06:43 18:19	08:13 (B1) 16:09	07:51 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	07:44 (B1) 20:22	06:12 21:24	05:02 22:07	04:26 21:57	04:46 20:57	05:43 19:37	06:45 18:17	08:16 (B1) 16:07	07:53 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	07:44 (B1) 20:24	06:10 21:26	05:01 22:08	04:25 21:55	04:48 20:54	05:45 19:34	06:47 18:14	08:16 (B1) 16:06	07:55 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	07:44 (B1) 20:26	06:09 21:27	05:00 22:09	04:25 21:54	04:49 20:52	05:47 19:31	06:49 18:12	08:16 (B1) 16:04	07:57 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	07:44 (B1) 20:28	06:04 21:29	04:57 22:09	04:25 21:53	04:49 20:50	05:49 19:29	06:51 18:09	08:16 (B1) 16:02	07:59 15:38
19	08:36 16:18	07:36 17:25	06:24 18:26	07:44 (B1) 20:30	06:02 21:31	04:55 22:09	04:25 21:51	04:52 20:47	05:51 19:26	06:53 18:07	08:16 (B1) 16:01	07:59 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	07:44 (B1) 20:33	06:01 21:33	04:53 22:10	04:25 21:50	04:54 20:45	05:53 19:23	06:55 18:04	08:16 (B1) 15:59	07:59 15:38
21	08:33 16:22	07:31 17:30	06:18 18:30	07:44 (B1) 20:35	05:57 21:35	04:52 22:10	04:25 21:48	04:56 20:42	05:55 19:20	06:57 18:02	08:16 (B1) 15:58	07:59 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	07:44 (B1) 20:37	05:54 21:37	04:50 22:10	04:25 21:46	04:57 20:40	05:57 19:18	06:59 17:59	08:16 (B1) 15:56	07:59 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	07:44 (B1) 20:39	05:52 21:38	04:48 22:10	04:26 21:45	04:59 20:37	05:59 19:15	07:01 17:57	08:16 (B1) 15:55	07:59 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	07:44 (B1) 20:41	05:49 21:40	04:47 22:10	04:26 21:43	05:01 20:35	06:01 19:12	07:03 17:55	08:16 (B1) 15:53	07:59 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	07:44 (B1) 20:43	05:47 21:42	04:45 22:10	04:26 21:41	05:03 20:32	06:03 19:10	07:05 16:52	08:16 (B1) 15:52	07:59 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	07:44 (B1) 20:45	05:44 21:43	04:44 22:10	04:27 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:16 (B1) 15:51	07:59 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	07:44 (B1) 20:47	05:42 21:45	04:42 22:10	04:27 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:16 (B1) 15:49	07:59 15:43
28	08:22 16:36	07:13 17:45	05:59 18:45	07:44 (B1) 20:49	05:39 21:47	04:41 22:10	04:28 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:16 (B1) 15:48	07:59 15:44
29	08:20 16:39	07:11 17:49	05:57 18:49	07:44 (B1) 20:51	05:37 21:48	04:39 22:10	04:28 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:16 (B1) 15:47	07:59 15:44
30	08:19 16:41	07:09 17:59	05:54 18:59	07:44 (B1) 20:53	05:35 21:50	04:38 22:09	04:29 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:16 (B1) 15:46	07:59 15:45
31	08:17 16:43	07:07 18:05	05:51 19:51	07:44 (B1) 20:55	05:33 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:15 18:56	07:20 16:38	08:16 (B1) 15:45	07:59 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		23	282						10	303		
Sun reduction		0.20	0.41						0.43	0.26		
Oper. time red.		0.98	0.98						0.98	0.98		
Wind dir. red.		0.62	0.62						0.62	0.62		
Total reduction		0.12	0.25						0.26	0.16		
Total, real		3	71						3	48		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Grantini 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (157)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:22 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
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7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
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11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
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15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:31 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
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29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Graudini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (175)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Operational time

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Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
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7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
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11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
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13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:26 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
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30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Gulbji - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (180)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:49	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:28 15:44
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:26 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
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9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
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16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
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18	08:37 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
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20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
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22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	05:00 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:50 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
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29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Guž ani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (40)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
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7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
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21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ievas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (59)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	07:55 (B14) 19:53	06:49 20:55	04:36 21:53
2	08:50 15:50	08:13 16:48	07:08 17:50	07:55 (B14) 19:55	06:46 20:58	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	07:56 (B14) 19:57	06:43 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	07:57 (B14) 19:59	06:41 21:02	04:33 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	07:57 (B14) 20:01	06:38 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	07:59 (B14) 20:03	06:36 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	08:01 (B14) 20:06	06:33 21:08	04:30 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03	08:04 (B14) 20:08	06:30 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	08:10 (B14) 20:10	06:28 21:12	04:29 22:02
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	7 07:00 (B22) 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	10 07:00 (B22) 21:16	04:27 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	14 07:02 (B22) 21:18	04:27 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	17 07:02 (B22) 21:20	04:27 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	19 07:02 (B22) 21:22	04:26 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	22 07:02 (B22) 21:24	04:26 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	21 07:01 (B22) 21:26	04:26 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	21 06:41 (B22) 21:27	04:25 22:08
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	20 06:40 (B22) 21:29	04:25 22:09
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	19 06:59 (B22) 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	18 06:59 (B22) 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	15 06:58 (B22) 21:35	04:25 22:10
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	11 06:55 (B22) 21:37	04:26 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	4 06:52 (B22) 21:38	04:26 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	27 06:44 (B22) 21:40	04:26 22:10
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	28 06:44 (B22) 21:42	04:27 22:10
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	29 06:44 (B22) 21:43	04:27 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	30 06:44 (B22) 21:45	04:27 22:10
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	29 06:44 (B22) 21:47	04:28 22:10
29	08:20 16:39		05:57 19:47	05:37 20:51	30 06:44 (B22) 21:48	04:29 22:10
30	08:19 16:41		06:54 19:49	05:35 20:53		04:29 22:09
31	08:17 16:43		06:51 19:51			04:37 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		279	168		220	
Sun reduction		0.20	0.41		0.50	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.63	0.63		0.66	
Total reduction		0.12	0.25		0.32	
Total, real		34	42		70	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ievas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (59)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	06:47 (B22) 07:01 (B22)	07:17 18:54	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	06:49 (B22) 06:59 (B22)	07:19 18:51	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	06:51 (B22) 06:58 (B22)	07:21 18:48	07:27 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	06:53 (B22) 06:55 (B22)	07:23 18:46	07:29 16:30
5	04:34 22:07	05:23 21:20	06:25 20:04	07:25 18:43	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:38 (B14) 08:50 (B14)	07:33 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:35 (B14) 08:52 (B14)	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:33 (B14) 08:54 (B14)	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:32 (B14) 08:56 (B14)	07:40 16:19
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:31 (B14) 08:56 (B14)	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:30 (B14) 08:57 (B14)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:29 (B14) 08:57 (B14)	07:46 16:13
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:28 (B14) 08:57 (B14)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:27 (B14) 08:57 (B14)	07:51 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:28 (B14) 08:57 (B14)	07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:28 (B14) 08:57 (B14)	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:27 (B14) 08:56 (B14)	07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	08:27 (B14) 08:55 (B14)	07:59 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:28 (B14) 08:55 (B14)	08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:29 (B14) 08:54 (B14)	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 (B22) 19:21	07:59 18:02	08:29 (B14) 08:52 (B14)	08:05 15:58
22	04:58 21:46	05:57 20:40	06:59 (B22) 19:18	08:01 18:00	08:31 (B14) 08:51 (B14)	08:07 15:56
23	04:59 21:45	05:59 20:37	07:00 (B22) 19:15	08:03 17:57	08:34 (B14) 08:50 (B14)	08:09 15:55
24	05:01 21:43	06:01 20:35	07:02 (B22) 19:12	08:05 17:55	08:36 (B14) 08:47 (B14)	08:11 15:53
25	05:03 21:41	06:03 20:32	07:03 (B22) 19:10	08:07 17:52	08:37 (B14) 08:48 (B14)	08:13 15:52
26	05:05 21:39	06:05 20:30	07:04 (B22) 19:07	08:09 17:50	08:38 (B14) 08:49 (B14)	08:15 15:51
27	05:06 21:38	06:07 20:27	07:05 (B22) 19:04	08:11 17:48	08:39 (B14) 08:50 (B14)	08:17 15:50
28	05:08 21:36	06:09 20:24	07:06 (B22) 19:02	08:13 17:46	08:40 (B14) 08:51 (B14)	08:19 15:49
29	05:10 21:34	06:11 20:22	07:07 (B22) 18:59	08:15 17:44	08:41 (B14) 08:52 (B14)	08:21 15:48
30	05:12 21:32	06:13 20:19	07:08 (B22) 18:56	08:17 17:42	08:42 (B14) 08:53 (B14)	08:23 15:47
31	05:14 21:30	06:15 20:17	07:09 (B22) 18:53	08:19 17:40	08:43 (B14) 08:54 (B14)	08:25 15:46
Potential sun hours	529	469	385	324	247	216
Total, worst case		193	33	450		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.66	0.63		
Total reduction		0.32	0.27	0.16		
Total, real		61	9	71		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ievinas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (142)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
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11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
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15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
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18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
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20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Irbites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (167)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:51	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:08	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:03	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
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19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
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29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:10	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Jasmini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (93)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
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10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 20:04	07:36 18:30	07:42 16:17	08:38 15:39
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20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 20:06	07:57 18:05	08:03 15:59	08:48 15:39
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22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 20:06	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 20:04	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 20:06	08:05 17:55	08:11 15:53	08:50 15:41
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 20:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 20:06	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 20:06	08:16 17:43	08:21 15:47	08:51 15:45
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31	08:17 16:43	07:11 17:51	05:52 19:51	05:34 20:51	04:37 21:51	04:30 22:10	05:14 21:30	06:15 20:17	07:20 20:06	08:24 17:38	08:29 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunberzi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (189)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	06:18 (B14) 21:53	04:36 22:09	04:30 22:09	05:16 21:28	06:35 (B14) 20:14	06:17 18:54	07:17 16:36	07:23 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	06:19 (B14) 21:54	04:35 22:08	04:31 22:08	05:18 21:26	06:33 (B14) 20:11	06:19 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	06:19 (B14) 21:55	04:34 22:08	04:32 22:08	05:20 21:24	06:32 (B14) 20:09	06:21 18:48	07:21 16:32	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	06:19 (B14) 21:57	04:33 22:07	04:33 22:07	05:22 21:22	06:32 (B14) 20:06	06:23 18:46	07:23 16:30	07:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	06:19 (B14) 21:58	04:32 22:07	04:34 22:07	05:24 21:20	06:31 (B14) 20:03	06:25 18:43	07:25 16:27	07:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	06:20 (B14) 21:59	04:31 22:06	04:35 22:06	05:25 21:17	06:29 (B14) 20:01	06:27 18:40	07:28 16:25	07:33 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	06:20 (B14) 22:00	04:30 22:05	04:36 22:05	05:27 21:15	06:29 (B14) 19:58	06:29 18:38	07:30 16:23	07:36 15:40
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	06:21 (B14) 22:01	04:29 22:04	04:37 22:04	05:29 21:13	06:29 (B14) 19:56	06:31 18:35	07:32 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	06:22 (B14) 22:02	04:29 22:03	04:38 22:03	05:31 21:11	06:28 (B14) 19:53	06:33 18:33	07:34 16:19	07:40 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	06:22 (B14) 22:03	04:28 22:02	04:40 22:02	05:33 21:08	06:28 (B14) 19:50	06:35 18:30	07:36 16:17	07:42 15:39
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15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	06:37 (B14) 22:07	04:26 21:57	04:46 21:57	05:43 20:57	06:27 (B14) 19:37	06:45 18:17	07:46 16:08	07:53 15:38
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18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	04:51 21:52	05:49 20:50	06:29 (B14) 19:29	06:51 18:09	07:52 16:03	07:59 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	06:34 (B14) 22:10	04:55 21:51	04:53 21:51	05:51 20:47	06:28 (B14) 19:26	06:53 18:07	07:55 16:01	08:01 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	06:30 (B14) 22:10	04:54 21:49	04:54 21:49	05:53 20:45	06:29 (B14) 19:23	06:55 18:04	07:57 15:59	08:03 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	06:27 (B14) 22:10	04:52 21:48	04:56 21:48	05:55 20:42	06:30 (B14) 19:21	06:57 18:02	07:59 15:58	08:05 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	06:25 (B14) 22:10	04:50 21:46	04:58 21:46	05:57 20:40	06:32 (B14) 19:18	06:59 18:00	08:01 15:56	08:07 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	06:23 (B14) 22:10	04:49 21:45	04:59 21:45	05:59 20:37	06:34 (B14) 19:15	07:01 17:57	08:03 15:55	08:09 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	06:22 (B14) 22:10	04:47 21:43	04:57 21:43	06:01 20:35	06:39 (B14) 19:12	07:03 17:55	08:05 15:53	08:11 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	06:22 (B14) 22:10	04:45 21:41	04:57 21:41	06:03 20:32	06:43 (B14) 19:10	07:05 17:52	08:07 15:52	08:13 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	06:20 (B14) 22:10	04:44 21:39	04:57 21:39	06:05 20:30	06:39 (B14) 19:07	07:07 17:50	08:10 15:51	08:15 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	06:20 (B14) 22:10	04:42 21:38	04:56 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	06:20 (B14) 22:10	04:41 21:36	04:58 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 18:47	05:37 20:51	04:40 21:48	06:20 (B14) 22:10	04:40 21:34	04:59 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41	07:04 17:49	05:54 18:49	05:35 20:53	04:38 21:50	06:19 (B14) 22:09	04:38 21:32	04:59 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:03 17:51	05:52 18:51	05:32 20:54	04:37 21:51	06:18 (B14) 22:09	04:37 21:30	04:58 21:30	06:15 20:17	07:17 18:58	07:19 16:43	08:23 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216	
Total, worst case				296	337		24	613					
Sun reduction				0.50	0.57		0.49	0.50					
Oper. time red.				0.98	0.98		0.98	0.98					
Wind dir. red.				0.65	0.65		0.65	0.65					
Total reduction				0.32	0.36		0.31	0.32					
Total, real				94	122		8	194					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaundruvas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (23)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	11	07:11 (B1) 07:22 (B1)	04:36 04:35	04:30 04:31	05:16 05:17		06:17 06:19	07:04 (B1) 07:05 (B1)	07:17 07:19	07:23 07:25	08:24 08:26
2	15:49	16:47	17:50	19:55	20:57		21:54	22:09	21:26	20:11	32	07:37 (B1)	18:51	16:34	15:44	
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00		04:34 21:55	04:32 22:08	05:19 21:24	06:21 20:09	30	07:06 (B1) 07:36 (B1)	07:21 18:48	07:27 16:31	08:28 15:43	
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02		04:33 21:57	04:33 22:07	05:21 21:22	06:23 20:06	27	07:07 (B1) 07:34 (B1)	07:23 18:46	07:29 16:29	08:29 15:42	
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	13	07:17 (B1) 07:30 (B1)	04:32 21:58	05:23 22:07	06:25 20:03	24	07:07 (B1) 07:31 (B1)	07:25 18:43	07:31 16:27	08:31 15:41	
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	20	07:14 (B1) 07:34 (B1)	05:21 21:59	05:25 22:06	06:27 20:01	20	07:09 (B1) 07:34 (B1)	07:27 18:40	07:33 16:25	08:32 15:41	
7	08:48 15:56	08:03 16:59	06:55 18:00	06:33 20:05	05:19 21:08	24	07:11 (B1) 07:35 (B1)	05:19 22:00	05:27 21:15	06:29 19:58	13	07:12 (B1) 07:25 (B1)	07:29 18:38	07:36 16:23	08:34 15:40	
8	08:48 15:58	08:00 17:01	06:53 18:03	06:30 20:08	05:17 21:10	27	07:09 (B1) 07:36 (B1)	05:17 22:01	05:29 21:13	06:31 19:55		07:32 18:35	07:38 16:21	08:35 15:40		
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:15 21:12	30	07:08 (B1) 07:38 (B1)	05:15 22:02	05:31 21:11	06:33 19:53		07:34 18:32	07:40 16:19	08:37 15:39		
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	32	07:06 (B1) 07:38 (B1)	05:13 22:02	05:33 21:08	06:35 19:50		07:36 18:30	07:42 16:17	08:38 15:39		
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:10 21:16	34	07:05 (B1) 07:39 (B1)	05:10 22:01	05:35 21:06	06:37 19:47		07:38 18:27	07:44 16:15	08:39 15:38		
12	08:44 16:04	07:52 17:10	06:42 18:11	06:20 20:16	05:08 21:18	35	07:04 (B1) 07:39 (B1)	05:08 22:05	05:37 21:04	06:39 19:45	13	07:19 (B1) 07:32 (B1)	06:39 19:45	07:40 18:25	07:46 16:13	
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	37	07:03 (B1) 07:40 (B1)	05:06 22:06	05:39 21:01	06:41 19:42	19	07:16 (B1) 07:35 (B1)	06:41 19:42	07:42 18:22	07:49 16:11	
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	38	07:02 (B1) 07:40 (B1)	05:04 22:07	05:41 20:59	06:43 19:39	23	07:14 (B1) 07:37 (B1)	06:43 19:39	07:44 18:19	07:51 16:09	
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:02 21:24	38	07:02 (B1) 07:40 (B1)	05:02 22:07	05:43 20:57	06:45 19:37	25	07:13 (B1) 07:38 (B1)	06:45 19:37	07:46 18:17	07:53 16:07	
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	39	07:01 (B1) 07:40 (B1)	05:01 22:08	05:45 20:54	06:47 19:34	29	07:11 (B1) 07:40 (B1)	06:47 19:34	07:48 18:14	07:55 16:06	
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	39	07:01 (B1) 07:40 (B1)	04:59 22:08	05:47 20:52	06:49 19:31	31	07:09 (B1) 07:40 (B1)	06:49 19:31	07:50 18:12	07:57 16:04	
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	38	07:01 (B1) 07:39 (B1)	04:57 22:09	05:49 20:50	06:51 19:29	33	07:08 (B1) 07:41 (B1)	06:51 19:29	07:52 18:09	07:59 16:02	
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	38	07:01 (B1) 07:39 (B1)	04:55 22:09	05:51 20:47	06:53 19:26	34	07:07 (B1) 07:41 (B1)	06:53 19:26	07:55 18:07	08:01 16:01	
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	38	07:00 (B1) 07:38 (B1)	04:53 22:10	05:53 20:45	06:55 19:23	35	07:07 (B1) 07:42 (B1)	06:55 19:23	07:57 18:04	08:03 15:59	
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	37	07:01 (B1) 07:38 (B1)	04:52 22:10	05:55 20:48	06:57 19:20	36	07:06 (B1) 07:42 (B1)	06:57 19:20	07:59 18:02	08:05 15:58	
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	37	07:01 (B1) 07:38 (B1)	04:50 22:10	05:57 20:40	06:59 19:18	38	07:05 (B1) 07:43 (B1)	06:59 19:18	08:01 17:59	08:07 15:56	
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	35	07:01 (B1) 07:36 (B1)	04:48 22:10	05:59 21:45	07:01 20:37	38	07:05 (B1) 07:43 (B1)	07:01 19:15	08:03 17:57	08:09 15:55	
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	34	07:01 (B1) 07:36 (B1)	04:47 22:10	06:01 21:43	06:01 20:35	38	07:05 (B1) 07:43 (B1)	07:03 19:12	08:05 17:55	08:11 15:53	
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:42	32	07:03 (B1) 07:35 (B1)	04:45 22:10	06:03 21:41	06:03 20:32	39	07:04 (B1) 07:43 (B1)	07:05 19:10	08:07 16:52	08:13 15:52	
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	30	07:03 (B1) 07:33 (B1)	04:44 22:10	06:05 21:39	06:07 20:29	39	07:03 (B1) 07:42 (B1)	07:07 19:07	08:15 16:50	08:51 15:51	
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	28	07:04 (B1) 07:32 (B1)	04:42 22:10	06:07 21:38	06:09 20:27	39	07:03 (B1) 07:42 (B1)	07:09 19:04	08:17 16:47	08:51 15:49	
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:41 21:47	25	07:05 (B1) 07:30 (B1)	04:41 22:10	06:09 21:36	07:11 20:24	38	07:03 (B1) 07:41 (B1)	07:11 19:02	08:19 16:45	08:51 15:48	
29	08:20 16:39		06:57 19:47	05:37 20:51	04:39 21:48	22	07:07 (B1) 07:29 (B1)	04:39 22:10	06:11 21:34	07:13 20:22	38	07:03 (B1) 07:41 (B1)	07:13 18:59	08:21 16:43	08:51 15:47	
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:50	17	07:08 (B1) 07:25 (B1)	04:38 22:09	06:13 21:32	07:15 20:19	37	07:03 (B1) 07:40 (B1)	07:15 18:56	08:22 16:40	08:51 15:45	
31	08:17 16:43		06:51 19:51		04:37 21:51			05:14 21:30	06:15 20:17	07:04 (B1) 07:39 (B1)				08:25 16:38	08:51 15:47	
Potential sun hours	235	266	366	426	508			529	529	469		385		324	247	216
Total, worst case				817	11					657		180				
Sun reduction				0.50	0.57					0.50		0.43				
Oper. time red.				0.98	0.98					0.98		0.98				
Wind dir. red.				0.66	0.66					0.66		0.66				
Total reduction				0.32	0.37					0.32		0.28				
Total, real				263	4					211		50				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaundruvas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (113)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		13:08 (B22)	08:15		07:11				06:49			05:32			06:39 (B1)	04:36	
	15:48	7	13:15 (B22)	16:45		17:47				19:53			20:55	41		07:20 (B1)	21:53	
2	08:50			08:13		07:08				06:46			05:30			06:39 (B1)	04:35	
	15:49			16:47		17:50				19:55			20:57	41		07:20 (B1)	21:54	
3	08:50			08:11		07:06				06:43			05:28			06:39 (B1)	04:34	
	15:51			16:50		17:52				19:57			21:00	41		07:20 (B1)	21:55	
4	08:50			08:09		07:03				06:41			05:26			06:40 (B1)	04:33	
	15:52			16:52		17:54				19:59			21:02	39		07:19 (B1)	21:57	
5	08:49			08:07		07:00				06:38			05:23			06:40 (B1)	04:32	
	15:53			16:54		17:56				20:01			21:04	39		07:19 (B1)	21:58	
6	08:49			08:05		06:58				06:35			05:21			06:41 (B1)	04:31	
	15:55			16:56		17:58				20:03			21:06	37		07:18 (B1)	21:59	
7	08:48			08:03		06:55				06:33			05:19			06:41 (B1)	04:30	
	15:56			16:59		18:00				20:05			21:08	36		07:17 (B1)	22:00	
8	08:48			08:00		06:53				06:30			05:17			06:42 (B1)	04:29	
	15:58			17:01		18:03				20:08			21:10	34		07:16 (B1)	22:01	
9	08:47			07:58		06:50				06:27			05:15			06:42 (B1)	04:28	
	15:59			17:03		18:05				20:10			21:12	33		07:15 (B1)	22:02	
10	08:46			07:56		06:47				06:25			05:13			06:43 (B1)	04:28	
	16:01			17:05		18:07				20:12			21:14	31		07:14 (B1)	22:03	
11	08:45			07:54		06:45				06:22			05:10			06:44 (B1)	04:27	
	16:03			17:08		18:09				20:14			21:16	29		07:13 (B1)	22:04	
12	08:44			07:52		06:42			07:08 (B4)	06:20			05:08			06:45 (B1)	04:27	
	16:04			17:10		18:11		6	07:14 (B4)	20:16			21:18	26		07:11 (B1)	22:05	
13	08:43			07:49		06:39			07:05 (B4)	06:17			05:06			06:46 (B1)	04:26	
	16:06			17:12		18:13		11	07:16 (B4)	20:18			21:20	24		07:10 (B1)	22:06	
14	08:42			07:47		06:37			07:02 (B4)	06:14			05:04			06:49 (B1)	04:26	
	16:08			17:14		18:15		15	07:17 (B4)	20:20		13	07:10 (B1)	21:22	20	07:09 (B1)	22:07	
15	08:41			07:45		06:34			06:59 (B4)	06:12			05:02			06:50 (B1)	04:26	
	16:10			17:17		18:17		18	07:17 (B4)	20:22		19	07:13 (B1)	21:24	16	07:06 (B1)	22:07	
16	08:40			07:43		06:31			06:58 (B4)	06:09			05:01			06:53 (B1)	04:25	
	16:12			17:19		18:20		21	07:19 (B4)	20:24		25	07:15 (B1)	21:25	10	07:03 (B1)	22:08	
17	08:39			07:40		06:29			06:57 (B4)	06:07			04:59				04:25	
	16:14			17:21		18:22		22	07:19 (B4)	20:26		28	07:17 (B1)	21:27			22:08	
18	08:37			07:38		06:26			06:56 (B4)	06:04			04:57				04:25	
	16:16			17:23		18:24		22	07:18 (B4)	20:28		31	07:18 (B1)	21:29			22:09	
19	08:36			07:35		06:23			06:57 (B4)	06:02			04:55				04:25	
	16:18			17:25		18:26		22	07:19 (B4)	20:30		33	07:19 (B1)	21:31			22:09	
20	08:35			07:33		06:21			06:56 (B4)	05:59			04:53				04:25	
	16:20			17:28		18:28		22	07:18 (B4)	20:33		35	07:19 (B1)	21:33			22:10	
21	08:33			07:31		06:18			06:56 (B4)	05:57			04:52				04:25	
	16:22			17:30		18:30		21	07:17 (B4)	20:35		37	07:20 (B1)	21:35			22:10	
22	08:32			07:28		06:15			06:58 (B4)	05:54			04:50				04:25	
	16:24			17:32		18:32		18	07:16 (B4)	20:37		38	07:21 (B1)	21:36			22:10	
23	08:30			07:26		06:13			06:58 (B4)	05:52			04:48				04:26	
	16:26			17:34		18:34		16	07:14 (B4)	20:39		40	07:21 (B1)	21:38			22:10	
24	08:29			07:23		06:10			06:59 (B4)	05:49			04:47				04:26	
	16:28			17:37		18:36		13	07:12 (B4)	20:41		40	07:21 (B1)	21:40			22:10	
25	08:27			07:21		06:07			07:02 (B4)	05:47			04:45				04:26	
	16:30			17:39		18:38		6	07:08 (B4)	20:43		41	07:22 (B1)	21:42			22:10	
26	08:26			07:18		06:05				05:44			04:44				04:27	
	16:32			17:41		18:40				20:45		42	07:21 (B1)	21:43			22:10	
27	08:24			07:16		06:02				05:42			04:42				04:27	
	16:34			17:43		18:43				20:47		42	07:21 (B1)	21:45			22:10	
28	08:22			07:13		05:59				05:39			04:41				04:28	
	16:36			17:45		18:45				20:49		42	07:21 (B1)	21:47			22:10	
29	08:20					06:57				05:37			04:39				04:28	
	16:39					19:47				20:51		42	07:21 (B1)	21:48			22:10	
30	08:18					06:54				05:35			04:38				04:29	
	16:41					19:49				20:53		41	07:20 (B1)	21:50			22:09	
31	08:17					06:51							04:37					
	16:43					19:51							21:51					
Potential sun hours	235			266		366				426			508				529	
Total, worst case		7				233				589					497			
Sun reduction		0.13				0.41				0.50					0.57			
Oper. time red.		0.98				0.98				0.98					0.98			
Wind dir. red.		0.64				0.63				0.66					0.66			
Total reduction		0.08				0.25				0.32					0.36			
Total, real		1				59				189					181			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaundruvas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (113)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	04:30 22:09	05:16 21:28	06:55 (B1) 07:22 (B1)	06:17 20:14	07:17 18:54	07:46 (B4) 07:54 (B4)	07:23 16:36	08:24 15:45	
2	04:31 22:09	05:17 21:26	06:54 (B1) 07:24 (B1)	06:19 20:11	07:19 18:51		07:25 16:34	08:26 15:44	
3	04:32 22:08	05:19 21:24	06:53 (B1) 07:25 (B1)	06:21 20:09	07:21 18:48		07:27 16:31	08:28 15:43	
4	04:33 22:07	05:21 21:22	06:52 (B1) 07:26 (B1)	06:23 20:06	07:23 18:46		07:29 16:29	08:29 15:42	
5	04:33 22:07	05:23 21:19	06:51 (B1) 07:26 (B1)	06:25 20:03	07:25 18:43		07:31 16:27	08:31 15:41	
6	04:35 22:06	05:25 21:17	06:50 (B1) 07:27 (B1)	06:27 20:01	07:27 18:40		07:33 16:25	08:32 15:41	
7	04:36 22:05	05:27 21:15	06:50 (B1) 07:27 (B1)	06:29 19:58	07:29 18:38		07:36 16:23	08:34 15:40	
8	04:37 22:04	05:29 21:13	06:49 (B1) 07:28 (B1)	06:31 19:55	07:32 18:35		07:38 16:21	08:35 15:40	
9	04:38 22:03	05:31 21:11	06:49 (B1) 07:29 (B1)	06:33 19:53	07:34 18:32		07:40 16:19	08:37 15:39	
10	04:39 22:02	05:33 21:08	06:48 (B1) 07:28 (B1)	06:35 19:50	07:36 18:30		07:42 16:17	08:38 15:39	
11	04:41 22:01	05:35 21:06	06:47 (B1) 07:28 (B1)	06:37 19:47	07:38 18:27		07:44 16:15	08:39 15:38	12:58 (B22)
12	04:42 22:00	05:37 21:04	06:47 (B1) 07:29 (B1)	06:39 19:45	07:40 18:25		07:46 16:13	08:40 15:38	6 13:04 (B22)
13	04:43 21:59	05:39 21:01	06:47 (B1) 07:29 (B1)	06:41 19:42	07:42 18:22		07:49 16:11	08:42 15:38	9 13:07 (B22)
14	04:45 21:58	05:41 20:59	06:47 (B1) 07:29 (B1)	06:43 19:39	07:44 18:19		07:51 16:09	08:43 15:38	11 13:08 (B22)
15	04:46 21:57	05:43 20:57	06:47 (B1) 07:29 (B1)	06:45 19:37	07:46 18:17		07:53 16:07	08:44 15:38	12 13:09 (B22)
16	04:48 21:55	05:45 20:54	06:47 (B1) 07:29 (B1)	06:47 19:34	07:48 18:14		07:55 16:06	08:45 15:38	13 13:10 (B22)
17	04:49 21:54	05:47 20:52	06:46 (B1) 07:28 (B1)	06:49 19:31	07:50 18:12		07:57 16:04	08:46 15:38	14 13:11 (B22)
18	04:51 21:52	05:49 20:50	06:46 (B1) 07:27 (B1)	06:51 19:29	07:52 (B4) 07:55 (B4)		07:59 16:02	08:46 15:38	15 13:12 (B22)
19	04:52 21:51	05:51 20:47	06:47 (B1) 07:27 (B1)	06:53 19:26	07:47 (B4) 07:59 (B4)		08:01 16:01	08:47 15:38	15 13:13 (B22)
20	04:54 21:49	05:53 20:45	06:47 (B1) 07:26 (B1)	06:55 19:23	07:45 (B4) 08:01 (B4)		08:03 15:59	08:48 15:38	15 13:12 (B22)
21	04:56 21:48	05:55 20:42	06:47 (B1) 07:26 (B1)	06:57 19:20	07:43 (B4) 08:01 (B4)		08:05 15:58	08:48 15:39	15 13:13 (B22)
22	04:57 21:46	05:57 20:40	06:48 (B1) 07:25 (B1)	06:59 19:18	07:41 (B4) 08:01 (B4)		08:07 15:56	08:49 15:39	15 13:14 (B22)
23	04:59 21:45	05:59 20:37	06:49 (B1) 07:24 (B1)	07:01 19:15	07:40 (B4) 08:01 (B4)		08:03 15:55	08:50 15:40	15 13:00 (B22)
24	05:01 21:43	06:01 20:35	06:49 (B1) 07:23 (B1)	07:03 19:12	07:40 (B4) 08:01 (B4)		08:11 15:53	08:50 15:40	15 13:15 (B22)
25	05:03 21:41	06:03 20:32	06:50 (B1) 07:21 (B1)	07:05 19:10	07:39 (B4) 08:01 (B4)		08:13 15:52	08:50 15:41	15 13:00 (B22)
26	05:04 21:39	06:05 20:29	06:51 (B1) 07:19 (B1)	07:07 19:07	07:39 (B4) 08:00 (B4)		08:15 15:51	08:51 15:42	16 13:16 (B22)
27	05:06 21:38	06:07 20:27	06:52 (B1) 07:17 (B1)	07:09 19:04	07:40 (B4) 08:01 (B4)		08:17 15:49	08:51 15:43	15 13:02 (B22)
28	05:08 21:36	06:09 20:24	06:55 (B1) 07:14 (B1)	07:11 19:02	07:40 (B4) 08:00 (B4)		08:19 15:48	08:51 15:44	14 13:16 (B22)
29	05:10 21:34	06:11 20:22	06:58 (B1) 07:10 (B1)	07:13 18:59	07:42 (B4) 07:58 (B4)		08:21 15:47	08:51 15:44	14 13:16 (B22)
30	05:12 21:32	06:58 (B1) 07:20 (B1)	06:13 20:19	07:15 18:56	07:44 (B4) 07:57 (B4)		08:22 15:46	08:51 15:45	12 13:05 (B22)
31	05:14 21:30	06:57 (B1) 07:22 (B1)	06:15 20:17		07:20 16:38			08:51 15:47	11 13:16 (B22)
Potential sun hours	529	469	385	324	247	216			
Total, worst case	80	1024	224	8		277			
Sun reduction	0.49	0.50	0.43	0.26		0.07			
Oper. time red.	0.98	0.98	0.98	0.98		0.98			
Wind dir. red.	0.66	0.66	0.63	0.63		0.64			
Total reduction	0.32	0.32	0.26	0.16		0.04			
Total, real	25	327	59	1		12			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunie Robežnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (222)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:32 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:13 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:20 20:16	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:25 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:18 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunjosti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (182)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:20 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:22 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:26 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:28 20:01	07:28 18:41	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:30 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:12	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:09	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:24	06:26 18:24	06:04 20:29	04:57 21:29	04:26 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:54 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:50 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:04 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:06 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 19:05	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:25	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunlakstīgalas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (63)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48		06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14		07:17 18:54	9	07:47 (B14) 07:56 (B14)	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50		06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11		07:19 18:51			07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52		06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09		07:21 18:48			07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54		06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06		07:23 18:46			07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56		06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04		07:25 18:43			07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58		06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01		07:27 18:40			07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01		06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58		07:30 18:38			07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03		06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56		07:32 18:35			07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05		06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53		07:34 18:33			07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07		06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50		07:36 18:30			07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09		06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47		07:38 18:27			07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	2	07:11 (B14) 07:13 (B14)	06:20 20:16	05:09 21:18	04:27 22:05	05:37 21:04	06:39 19:45	4	07:56 (B14) 08:00 (B14)			07:46 18:25	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	2	07:05 (B14) 07:18 (B14)	06:17 20:18	05:07 21:20	04:27 22:06	05:39 21:02	06:41 19:42	4	07:50 (B14) 08:04 (B14)			07:42 18:22	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	13	07:02 (B14) 07:20 (B14)	06:15 20:20	05:05 21:22	04:26 22:07	05:41 21:58	06:43 20:39	14	07:48 (B14) 08:06 (B14)			07:44 18:20	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	18	07:00 (B14) 07:22 (B14)	06:12 20:22	05:03 21:24	04:26 22:07	05:43 21:57	06:45 20:37	18	07:46 (B14) 08:08 (B14)			07:46 18:17	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	22	06:59 (B14) 07:23 (B14)	06:09 20:24	05:01 21:25	04:26 22:08	05:45 21:55	06:47 20:34	22	07:44 (B14) 08:09 (B14)			07:48 18:15	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	24	06:57 (B14) 07:24 (B14)	06:07 20:26	04:59 21:27	04:25 22:08	05:49 21:54	06:49 20:31	25	07:43 (B14) 08:09 (B14)			07:50 18:12	08:46 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	27	06:56 (B14) 07:24 (B14)	06:04 20:28	04:57 21:29	04:25 22:09	05:49 21:52	06:51 20:29	26	07:42 (B14) 08:10 (B14)			07:52 18:09	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	28	06:55 (B14) 07:25 (B14)	06:02 20:31	04:55 21:31	04:25 22:09	05:51 21:51	06:53 20:47	28	07:41 (B14) 08:10 (B14)			07:55 18:07	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	30	06:54 (B14) 07:24 (B14)	05:59 20:33	04:54 21:33	04:25 22:10	05:53 21:49	06:55 20:45	29	07:40 (B14) 08:10 (B14)			07:57 18:04	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	30	06:54 (B14) 07:24 (B14)	05:57 20:35	04:52 21:35	04:25 22:10	05:55 21:48	06:57 20:42	30	07:40 (B14) 08:10 (B14)			07:59 18:02	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	30	06:54 (B14) 07:24 (B14)	05:54 20:37	04:50 21:37	04:26 22:10	05:57 21:46	06:59 20:40	31	07:39 (B14) 08:10 (B14)			08:01 18:00	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	30	06:54 (B14) 07:24 (B14)	05:52 20:39	04:48 21:38	04:26 22:10	05:59 21:45	07:01 20:37	30	07:39 (B14) 08:09 (B14)			08:03 17:57	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	30	06:53 (B14) 07:23 (B14)	05:49 20:41	04:47 21:40	04:26 22:10	06:01 21:43	07:03 20:35	30	07:39 (B14) 08:09 (B14)			08:05 17:55	08:51 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	28	06:54 (B14) 07:22 (B14)	05:47 20:43	04:45 21:42	04:27 22:10	06:03 21:41	07:05 20:32	29	07:39 (B14) 08:08 (B14)			07:07 16:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	27	06:54 (B14) 07:21 (B14)	05:45 20:45	04:44 21:43	04:27 22:10	06:05 21:39	07:07 20:30	28	07:39 (B14) 08:07 (B14)			07:10 16:50	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	25	06:55 (B14) 07:20 (B14)	05:42 20:47	04:42 21:45	04:28 22:10	06:06 21:38	07:09 20:27	25	07:40 (B14) 08:05 (B14)			07:12 16:48	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	23	06:56 (B14) 07:19 (B14)	05:40 20:49	04:41 21:47	04:28 22:10	06:09 21:36	07:11 20:24	23	07:41 (B14) 08:04 (B14)			07:14 16:45	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 18:47	19	07:57 (B14) 08:16 (B14)	05:37 20:51	04:40 21:48	04:29 22:10	06:11 21:34	07:13 20:22	20	07:42 (B14) 08:02 (B14)			07:16 16:43	08:51 15:45
30	08:19 16:41	07:10 17:49	06:54 18:49	14	07:59 (B14) 08:13 (B14)	05:35 20:53	04:38 21:50	04:29 22:09	06:13 21:32	07:15 20:19	15	07:44 (B14) 07:59 (B14)			07:18 16:41	08:51 15:46
31	08:17 16:43	07:08 17:51	06:52 18:09	6	08:03 (B14) 08:09 (B14)	20:53	21:51	22:09	06:15 21:30	07:20 20:17		07:20 16:38			08:22 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	528	529	469	385		324		247	216	
Total, worst case			456							457		9				
Sun reduction			0.41							0.43		0.26				
Oper. time red.			0.98							0.98		0.98				
Wind dir. red.			0.63							0.63		0.63				
Total reduction			0.26							0.27		0.16				
Total, real			117							121		1				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunleiš upi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (16)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51	08:15	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:23	08:24
	15:48	16:45	17:48	19:53	20:55	21:53	22:09	21:28	20:14	18:54	16:36	15:45
2	08:50	08:13	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25	08:26
	15:50	16:48	17:50	19:55	20:58	21:54	22:08	21:26	20:11	18:51	16:34	15:44
3	08:50	08:11	07:06	06:44	05:28	04:34	04:32	05:20	06:21	07:21	07:27	08:28
	15:51	16:50	17:52	19:57	21:00	21:55	22:08	21:24	20:09	18:48	16:32	15:43
4	08:50	08:09	07:03	06:41	05:26	04:33	04:33	05:22	06:23	07:23	07:29	08:29
	15:52	16:52	17:54	19:59	21:02	21:57	22:07	21:22	20:06	18:46	16:30	15:43
5	08:49	08:07	07:01	06:38	05:24	04:32	04:34	05:24	06:25	07:26	07:31	08:31
	15:54	16:54	17:56	20:01	21:04	21:58	22:07	21:20	20:04	18:43	16:27	15:42
6	08:49	08:05	06:58	06:36	05:21	04:31	04:35	05:26	06:27	07:28	07:33	08:32
	15:55	16:57	17:59	20:03	21:06	21:59	22:06	21:17	20:01	18:40	16:25	15:41
7	08:48	08:03	06:55	06:33	05:19	04:30	04:36	05:28	06:29	07:30	07:36	08:34
	15:57	16:59	18:01	20:06	21:08	22:00	22:05	21:15	19:58	18:38	16:23	15:41
8	08:48	08:01	06:53	06:30	05:17	04:30	04:37	05:29	06:31	07:32	07:38	08:35
	15:58	17:01	18:03	20:08	21:10	22:01	22:04	21:13	19:56	18:35	16:21	15:40
9	08:47	07:58	06:50	06:28	05:15	04:29	04:38	05:31	06:33	07:34	07:40	08:37
	16:00	17:03	18:05	20:10	21:12	22:02	22:03	21:11	19:53	18:33	16:19	15:40
10	08:46	07:56	06:48	06:25	05:13	04:28	04:40	05:33	06:35	07:36	07:42	08:38
	16:01	17:06	18:07	20:12	21:14	22:03	22:02	21:08	19:50	18:30	16:17	15:39
11	08:45	07:54	06:45	06:22	05:11	04:28	04:41	05:35	06:37	07:38	07:44	08:39
	16:03	17:08	18:09	20:14	21:16	22:04	22:01	21:06	19:48	18:27	16:15	15:39
12	08:44	07:52	06:42	06:20	05:09	04:27	04:42	05:37	06:39	07:40	07:46	08:40
	16:05	17:10	18:11	20:16	21:18	22:05	22:00	21:04	19:45	18:25	16:13	15:38
13	08:43	07:50	06:40	06:17	05:07	04:27	04:44	05:39	06:41	07:42	07:49	08:42
	16:07	17:12	18:13	20:18	21:20	22:06	21:59	21:02	19:42	18:22	16:11	15:38
14	08:42	07:47	06:37	06:15	05:05	04:26	04:45	05:41	06:43	07:44	07:51	08:43
	16:08	17:15	18:16	20:20	21:22	22:07	21:58	20:59	19:39	18:20	16:10	15:38
15	08:41	07:45	06:34	06:12	05:03	04:26	04:47	05:43	06:45	07:46	07:53	08:44
	16:10	17:17	18:18	20:22	21:24	22:07	21:57	20:57	19:37	18:17	16:08	15:38
16	08:40	07:43	06:32	06:10	05:01	04:26	04:48	05:45	06:47	07:48	07:55	08:45
	16:12	17:19	18:20	20:24	21:25	22:08	21:55	20:54	19:34	18:15	16:06	15:38
17	08:39	07:40	06:29	06:07	04:59	04:26	04:50	05:47	06:49	07:50	07:57	08:46
	16:14	17:21	18:22	20:26	21:27	22:08	21:54	20:52	19:31	18:12	16:04	15:38
18	08:37	07:38	06:26	06:04	04:57	04:25	04:51	05:49	06:51	07:53	07:59	08:46
	16:16	17:23	18:24	20:28	21:29	22:09	21:52	20:50	19:29	18:10	16:03	15:38
19	08:36	07:36	06:24	06:02	04:55	04:25	04:53	05:51	06:53	07:55	08:01	08:47
	16:18	17:26	18:26	20:31	21:31	22:09	21:51	20:47	19:26	18:07	16:01	15:39
20	08:35	07:33	06:21	05:59	04:54	04:25	04:54	05:53	06:55	07:57	08:03	08:48
	16:20	17:28	18:28	20:33	21:33	22:10	21:49	20:45	19:23	18:05	15:59	15:39
21	08:33	07:31	06:18	05:57	04:52	04:26	04:56	05:55	06:57	07:59	08:05	08:48
	16:22	17:30	18:30	20:35	21:35	22:10	21:48	20:42	19:21	18:02	15:58	15:39
22	08:32	07:28	06:16	05:54	04:50	04:26	04:58	05:57	06:59	08:01	08:07	08:49
	16:24	17:32	18:32	20:37	21:36	22:10	21:46	20:40	19:18	18:00	15:56	15:40
23	08:30	07:26	06:13	05:52	04:49	04:26	04:59	05:59	07:01	08:03	08:09	08:50
	16:26	17:35	18:34	20:39	21:38	22:10	21:45	20:37	19:15	17:57	15:55	15:40
24	08:29	07:23	06:10	05:49	04:47	04:26	05:01	06:01	07:03	08:05	08:11	08:50
	16:28	17:37	18:36	20:41	21:40	22:10	21:43	20:35	19:13	17:55	15:54	15:41
25	08:27	07:21	06:08	05:47	04:45	04:27	05:03	06:03	07:05	07:07	08:13	08:50
	16:30	17:39	18:39	20:43	21:42	22:10	21:41	20:32	19:10	16:52	15:52	15:41
26	08:26	07:18	06:05	05:45	04:44	04:27	05:05	06:05	07:07	07:10	08:15	08:51
	16:32	17:41	18:41	20:45	21:43	22:10	21:39	20:30	19:07	16:50	15:51	15:42
27	08:24	07:16	06:02	05:42	04:43	04:28	05:07	06:07	07:09	07:12	08:17	08:51
	16:35	17:43	18:43	20:47	21:45	22:10	21:38	20:27	19:04	16:48	15:50	15:43
28	08:22	07:13	06:00	05:40	04:41	04:28	05:08	06:09	07:11	07:14	08:19	08:51
	16:37	17:46	18:45	20:49	21:47	22:10	21:36	20:24	19:02	16:45	15:48	15:44
29	08:20		06:57	05:37	04:40	04:29	05:10	06:11	07:13	07:16	08:21	08:51
	16:39		19:47	20:51	21:48	22:10	21:34	20:22	18:59	16:43	15:47	15:45
30	08:19		06:54	05:35	04:39	04:30	05:12	06:13	07:15	07:18	08:22	08:51
	16:41		19:49	20:53	21:50	22:09	21:32	20:19	18:56	16:41	15:46	15:46
31	08:17		06:52		04:37		05:14	06:15		07:20		08:51
	16:43		19:51		21:51		21:30	20:17		16:38		15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunmedni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (174)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:51	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:08	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:03	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:41 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:37
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:43 17:19	06:31 18:19	06:09 20:24	05:00 21:26	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:38 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:53	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:11	05:00 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:11	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:10	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:17		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunmasani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (213)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:58	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:29 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:45
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunrudzati - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (83)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	07:14 (B14) 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	07:05 (B14) 18:54	07:17 16:36	07:23 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:11 (B14) 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	07:03 (B14) 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	07:09 (B14) 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:20 20:09	07:02 (B14) 18:48	07:21 16:32	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:06 (B14) 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:22 20:06	07:02 (B14) 18:46	07:23 16:30	07:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:04 (B14) 21:04	05:24 21:58	04:32 22:07	04:34 21:20	05:24 20:04	07:01 (B14) 18:43	07:26 16:27	07:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	07:04 (B14) 21:06	05:21 21:59	04:31 22:06	04:35 21:17	05:26 20:01	07:01 (B14) 18:40	07:28 16:25	07:34 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	07:04 (B14) 21:08	05:19 22:00	04:30 22:05	04:36 21:15	05:27 19:58	07:00 (B14) 18:38	07:30 16:23	07:36 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:04 (B14) 21:10	05:17 22:01	04:29 22:04	05:29 21:13	06:31 19:56	07:00 (B14) 18:35	07:32 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	07:04 (B14) 21:12	05:15 22:02	04:29 22:03	05:31 21:11	06:33 19:53	07:02 (B14) 18:33	07:34 16:19	07:40 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	07:05 (B14) 21:14	05:13 22:03	04:28 22:02	05:33 21:08	06:35 19:50	07:04 (B14) 18:30	07:36 16:17	07:42 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:06 (B14) 21:16	05:11 22:04	04:28 22:01	05:35 21:06	06:37 19:48	07:06 (B14) 18:27	07:38 16:15	07:44 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	07:07 (B14) 21:18	05:09 22:05	04:27 22:00	05:37 21:04	06:39 19:45	07:08 (B14) 18:25	07:40 16:13	07:46 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:12 (B14) 21:20	05:07 22:06	04:27 22:06	05:39 21:02	06:41 19:42	07:14 (B14) 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	07:14 (B14) 21:22	05:05 22:07	04:26 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	07:18 (B14) 21:24	05:03 22:07	04:26 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	07:20 (B14) 21:26	05:01 22:08	04:26 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	07:22 (B14) 21:27	04:59 22:08	04:26 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	07:24 (B14) 21:29	04:57 22:09	04:25 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	07:26 (B14) 21:31	04:55 22:09	04:25 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	07:28 (B14) 21:33	04:54 22:10	04:25 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	07:30 (B14) 21:35	04:52 22:10	04:26 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	07:32 (B14) 21:37	04:50 22:10	04:26 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	07:34 (B14) 21:38	04:49 22:10	04:26 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	07:36 (B14) 21:40	04:47 22:10	04:26 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	07:38 (B14) 21:42	04:45 22:10	04:27 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	07:40 (B14) 21:43	04:44 22:10	04:27 21:39	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	07:42 (B14) 21:45	04:42 22:10	04:28 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	07:44 (B14) 21:47	04:41 22:10	04:28 21:36	06:09 20:24	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 18:47	05:37 20:51	07:46 (B14) 21:48	04:40 22:10	04:29 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:04 17:49	05:54 18:49	05:35 20:53	07:48 (B14) 21:50	04:38 22:09	04:29 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:02 17:51	05:52 18:50	07:17 (B14) 20:53	07:50 (B14) 21:51	04:37 22:10	04:27 21:30	06:15 20:17	07:18 (B14) 18:58	08:19 17:40	08:23 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case			6	211				15	204			
Sun reduction			0.41	0.50				0.50	0.43			
Oper. time red.			0.98	0.98				0.98	0.98			
Wind dir. red.			0.66	0.66				0.66	0.66			
Total reduction			0.27	0.32				0.32	0.28			
Total, real			2	68				5	56			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalna Galvani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (35)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		10:37 (B1)	08:15		11:05 (B1)	07:11		07:55 (B2)	06:49		05:32		06:31 (B17)	04:36			
	15:48	44	11:21 (B1)	16:45	8	11:13 (B1)	17:47	24	08:19 (B2)	19:53		20:55	43	07:14 (B17)	21:53			
2	08:50		10:38 (B1)	08:13			07:08		07:55 (B2)	06:46		05:30		06:31 (B17)	04:34			
	15:49	44	11:22 (B1)	16:47			17:50	23	08:18 (B2)	19:55		20:57	43	07:14 (B17)	21:54			
3	08:50		09:29 (B4)	08:11			07:06		07:57 (B2)	06:43		05:28		06:31 (B17)	04:33			
	15:50	46	11:22 (B1)	16:49			17:52	21	08:18 (B2)	19:57		21:00	43	07:14 (B17)	21:55			
4	08:50		09:28 (B4)	08:09			07:03		07:58 (B2)	06:41		05:25		06:31 (B17)	04:32			
	15:52	48	11:22 (B1)	16:52			17:54	18	08:16 (B2)	19:59		21:02	42	07:13 (B17)	21:57			
5	08:49		09:28 (B4)	08:07			07:00		07:59 (B2)	06:38		05:23		06:31 (B17)	04:31			
	15:53	51	11:24 (B1)	16:54			17:56	14	08:13 (B2)	20:01		21:04	42	07:13 (B17)	21:58			
6	08:49		09:27 (B4)	08:05			06:58		08:03 (B2)	06:35		05:21		06:32 (B17)	04:31			
	15:55	53	11:24 (B1)	16:56			17:58	7	08:10 (B2)	20:03		21:06	41	07:13 (B17)	21:59			
7	08:48		09:26 (B4)	08:03			06:55			06:33		05:19		06:32 (B17)	04:30			
	15:56	55	11:24 (B1)	16:58			18:00			20:05		21:08	40	07:12 (B17)	22:00			
8	08:48		09:25 (B4)	08:00			06:53			06:30		05:17		06:32 (B17)	04:29			
	15:58	57	11:25 (B1)	17:01			18:03			20:07		21:10	40	07:12 (B17)	22:01			
9	08:47		09:24 (B4)	07:58			06:50			06:27		05:15		06:33 (B17)	04:28			
	15:59	59	11:25 (B1)	17:03			18:05			20:10		21:12	38	07:11 (B17)	22:02			
10	08:46		09:23 (B4)	07:56			06:47			06:25		05:12		06:33 (B17)	04:28			
	16:01	61	11:26 (B1)	17:05			18:07			20:12		21:14	37	07:10 (B17)	22:03			
11	08:45		09:22 (B4)	07:54			06:45			06:22		05:10		06:34 (B17)	04:27			
	16:03	63	11:26 (B1)	17:07			18:09			20:14		21:16	35	07:09 (B17)	22:04			
12	08:44		09:21 (B4)	07:52			06:42			06:20		05:08		06:34 (B17)	04:27			
	16:04	65	11:27 (B1)	17:10			18:11			20:16		21:18	34	07:08 (B17)	22:05			
13	08:43		09:20 (B4)	07:49			06:39			06:17		05:06		06:35 (B17)	04:26			
	16:06	65	11:26 (B1)	17:12			18:13			20:18		21:20	32	07:07 (B17)	22:06			
14	08:42		09:20 (B4)	07:47			06:37			06:14		05:04		06:37 (B17)	04:26			
	16:08	66	11:27 (B1)	17:14			18:15			20:20		21:22	30	07:07 (B17)	22:07			
15	08:41		09:21 (B4)	07:45			06:34			06:12		05:02		06:37 (B17)	04:25			
	16:10	66	11:27 (B1)	17:16			18:17			20:22		21:24	28	07:05 (B17)	22:07			
16	08:40		09:20 (B4)	07:43			06:31			06:09		05:00		06:38 (B17)	04:25			
	16:12	67	11:27 (B1)	17:19			18:20			20:24	15	07:03 (B17)	21:25	26	07:04 (B17)	22:08		
17	08:39		09:21 (B4)	07:40			06:29			06:07		04:59		06:39 (B17)	04:25			
	16:14	66	11:28 (B1)	17:21			18:22			20:26	21	07:06 (B17)	21:27	23	07:02 (B17)	22:09		
18	08:37		09:21 (B4)	07:38		08:05 (B2)	06:26			06:04		04:57		06:41 (B17)	04:25			
	16:15	65	11:27 (B1)	17:23	8	08:13 (B2)	18:24			20:28	26	07:08 (B17)	21:29	20	07:01 (B17)	22:09		
19	08:36		09:21 (B4)	07:35		08:03 (B2)	06:23			06:02		04:55		06:43 (B17)	04:25			
	16:17	65	11:27 (B1)	17:25	13	08:16 (B2)	18:26			20:30	29	07:10 (B17)	21:31	16	06:59 (B17)	22:09		
20	08:35		09:22 (B4)	07:33		08:00 (B2)	06:21			05:59		04:53		06:46 (B17)	04:25			
	16:19	65	11:28 (B1)	17:28	17	08:17 (B2)	18:28			20:32	31	07:10 (B17)	21:33	10	06:56 (B17)	22:10		
21	08:33		09:22 (B4)	07:31		07:58 (B2)	06:18			05:57		04:51			04:25			
	16:21	63	11:27 (B1)	17:30	21	08:19 (B2)	18:30			20:35	34	07:11 (B17)	21:35		22:10			
22	08:32		09:22 (B4)	07:28		07:57 (B2)	06:15			05:54		04:50			04:25			
	16:24	63	11:27 (B1)	17:32	22	08:19 (B2)	18:32			20:37	36	07:13 (B17)	21:37		22:10			
23	08:30		09:22 (B4)	07:26		07:56 (B2)	06:13			05:52		04:48			04:25			
	16:26	61	11:26 (B1)	17:34	24	08:20 (B2)	18:34			20:39	38	07:13 (B17)	21:38		22:10			
24	08:29		09:24 (B4)	07:23		07:55 (B2)	06:10			05:49		04:47			04:26			
	16:28	59	11:27 (B1)	17:36	25	08:20 (B2)	18:36			20:41	39	07:13 (B17)	21:40		22:10			
25	08:27		09:25 (B4)	07:21		07:55 (B2)	06:07			05:47		04:45			04:26			
	16:30	55	11:26 (B1)	17:39	25	08:20 (B2)	18:38			20:43	40	07:14 (B17)	21:42		22:10			
26	08:26		09:25 (B4)	07:18		07:55 (B2)	06:05			05:44		04:44			04:27			
	16:32	53	11:25 (B1)	17:41	26	08:21 (B2)	18:40			20:45	41	07:14 (B17)	21:43		22:10			
27	08:24		09:26 (B4)	07:16		07:55 (B2)	06:02			05:42		04:42			04:27			
	16:34	49	11:24 (B1)	17:43	25	08:20 (B2)	18:43			20:47	42	07:14 (B17)	21:45		22:10			
28	08:22		09:28 (B4)	07:13		07:55 (B2)	05:59			05:39		04:41			04:28			
	16:36	44	11:23 (B1)	17:45	25	08:20 (B2)	18:45			20:49	42	07:14 (B17)	21:47		22:10			
29	08:20		09:30 (B4)				06:57			05:37		04:39			04:28			
	16:38	38	11:22 (B1)				19:47			20:51	43	07:14 (B17)	21:48		22:10			
30	08:18		09:32 (B4)				06:54			05:35		04:38			04:29			
	16:41	29	11:20 (B1)				19:49			20:53	43	07:14 (B17)	21:50		22:09			
31	08:17		11:01 (B1)				06:51					04:37						
	16:43	17	11:18 (B1)				19:51					21:51						
Potential sun hours	235			266			366			426		508			529			
Total, worst case	1702			239			107			520		663						
Sun reduction	0.13			0.20			0.41			0.50		0.57						
Oper. time red.	0.98			0.98			0.98			0.98		0.98						
Wind dir. red.	0.60			0.62			0.63			0.65		0.65						
Total reduction	0.08			0.12			0.24			0.31		0.35						
Total, real	130			29			26			162		234						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalna Galvani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (35)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	05:15	06:44 (B17)	06:17	07:17	07:23		08:24		09:04 (B4)	
	22:09	21:28	35	07:19 (B17)	20:14	18:53		16:36		15:45	63
2	04:31	05:17		06:44 (B17)	06:19	07:19		07:25		08:26	
	22:09	21:26	36	07:20 (B17)	20:11	18:51		16:34		15:44	61
3	04:31	05:19		06:43 (B17)	06:21	07:21		07:27		08:28	
	22:08	21:24	38	07:21 (B17)	20:09	18:48		16:31		15:43	59
4	04:32	05:21		06:43 (B17)	06:23	07:23		07:29		08:29	
	22:07	21:22	38	07:21 (B17)	20:06	18:46		16:29		15:42	57
5	04:33	05:23		06:42 (B17)	06:25	07:25		07:31		08:31	
	22:07	21:19	39	07:21 (B17)	20:03	18:43		16:27		15:41	54
6	04:34	05:25		06:41 (B17)	06:27	07:27		07:33		08:32	
	22:06	21:17	41	07:22 (B17)	20:01	18:40		16:25		15:41	53
7	04:36	05:27		06:41 (B17)	06:29	07:29		07:36		08:34	
	22:05	21:15	41	07:22 (B17)	19:58	18:38		16:23		15:40	51
8	04:37	05:29		06:41 (B17)	06:31	07:31	08:35 (B2)	07:38		08:35	
	22:04	21:13	42	07:23 (B17)	19:55	18:35	12	08:47 (B2)	16:21	15:40	49
9	04:38	05:31		06:41 (B17)	06:33	07:34	08:33 (B2)	07:40		08:37	
	22:03	21:11	42	07:23 (B17)	19:53	18:32	16	08:49 (B2)	16:19	15:39	46
10	04:39	05:33		06:39 (B17)	06:35	07:36	08:32 (B2)	07:42	10:35 (B1)	08:38	
	22:02	21:08	43	07:22 (B17)	19:50	18:30	19	08:51 (B2)	16:17	15:39	44
11	04:40	05:35		06:39 (B17)	06:37	07:38	08:30 (B2)	07:44	10:32 (B1)	08:39	
	22:01	21:06	43	07:22 (B17)	19:47	18:27	22	08:52 (B2)	16:15	15:38	44
12	04:42	05:37		06:39 (B17)	06:39	07:40	08:29 (B2)	07:46	09:03 (B4)	08:40	
	22:00	21:04	43	07:22 (B17)	19:45	18:25	23	08:52 (B2)	16:13	15:38	44
13	04:43	05:39		06:39 (B17)	06:41	07:42	08:28 (B2)	07:49	09:01 (B4)	08:42	
	21:59	21:01	43	07:22 (B17)	19:42	18:22	24	08:52 (B2)	16:11	15:38	44
14	04:45	05:41		06:40 (B17)	06:43	07:44	08:27 (B2)	07:51	09:00 (B4)	08:43	
	21:58	20:59	42	07:22 (B17)	19:39	18:19	25	08:52 (B2)	16:09	15:38	44
15	04:46	05:43		06:40 (B17)	06:45	07:46	08:28 (B2)	07:53	08:58 (B4)	08:44	
	21:57	20:57	42	07:22 (B17)	19:37	18:17	25	08:53 (B2)	16:07	15:38	44
16	04:48	05:45		06:40 (B17)	06:47	07:48	08:27 (B2)	07:55	08:58 (B4)	08:45	
	21:55	20:54	42	07:22 (B17)	19:34	18:14	26	08:53 (B2)	16:06	15:38	44
17	04:49	05:47		06:39 (B17)	06:49	07:50	08:27 (B2)	07:57	08:58 (B4)	08:46	
	21:54	20:52	41	07:20 (B17)	19:31	18:12	25	08:52 (B2)	16:04	15:38	44
18	04:51	05:49		06:40 (B17)	06:51	07:52	08:27 (B2)	07:59	08:58 (B4)	08:46	
	21:52	20:49	40	07:20 (B17)	19:28	18:09	24	08:51 (B2)	16:02	15:38	44
19	04:52	05:51		06:40 (B17)	06:53	07:54	08:28 (B2)	08:01	08:57 (B4)	08:47	
	21:51	20:47	39	07:19 (B17)	19:26	18:07	23	08:51 (B2)	16:01	15:38	43
20	04:54	05:53		06:41 (B17)	06:55	07:57	08:28 (B2)	08:03	08:57 (B4)	08:48	
	21:49	20:45	37	07:18 (B17)	19:23	18:04	22	08:50 (B2)	15:59	15:38	43
21	04:56	05:55		06:41 (B17)	06:57	07:59	08:29 (B2)	08:05	08:57 (B4)	08:49	
	21:48	20:42	36	07:17 (B17)	19:20	18:02	20	08:49 (B2)	15:57	15:39	43
22	04:57	05:57		06:42 (B17)	06:59	08:01	08:31 (B2)	08:07	08:58 (B4)	08:49	
	21:46	20:40	34	07:16 (B17)	19:18	17:59	16	08:47 (B2)	15:56	15:39	43
23	04:59	05:59		06:43 (B17)	07:01	08:03	08:34 (B2)	08:09	08:58 (B4)	08:50	
	21:45	20:37	32	07:15 (B17)	19:15	17:57	12	08:46 (B2)	15:54	15:40	43
24	05:01	06:55 (B17)	06:01	06:45 (B17)	07:03	08:05	08:36 (B2)	08:11	08:58 (B4)	08:50	
	21:43	13	07:08 (B17)	20:35	28	07:13 (B17)	19:12	17:54	6	08:42 (B2)	15:53
25	05:02	06:52 (B17)	06:03	06:45 (B17)	07:05	07:07		08:13	08:58 (B4)	08:50	
	21:41	18	07:10 (B17)	20:32	25	07:10 (B17)	19:10	16:52	15:52	15:41	44
26	05:04	06:51 (B17)	06:05	06:47 (B17)	07:07	07:09		08:15	08:59 (B4)	08:51	
	21:39	21	07:12 (B17)	20:29	21	07:08 (B17)	19:07	16:50	15:50	15:42	44
27	05:06	06:50 (B17)	06:07	06:51 (B17)	07:09	07:12		08:17	09:00 (B4)	08:51	
	21:38	24	07:14 (B17)	20:27	13	07:04 (B17)	19:04	16:47	15:49	15:43	43
28	05:08	06:48 (B17)	06:09			07:11	07:14	08:19	09:00 (B4)	08:51	
	21:36	27	07:15 (B17)	20:24		19:02	16:45	15:48	11:07 (B1)	15:43	44
29	05:10	06:47 (B17)	06:11			07:13	07:16	08:21	09:01 (B4)	08:51	
	21:34	29	07:16 (B17)	20:22		18:59	16:43	15:47	11:07 (B1)	15:44	44
30	05:12	06:46 (B17)	06:13			07:15	07:18	08:22	09:02 (B4)	08:51	
	21:32	31	07:17 (B17)	20:19		18:56	16:40	15:46	11:08 (B1)	15:45	44
31	05:14	06:45 (B17)	06:15			07:20				08:51	
	21:30	33	07:18 (B17)	20:17		16:38				15:46	44
Potential sun hours	529		469		385	324		247		216	
Total, worst case	200		996			340		1130		1454	
Sun reduction	0.49		0.50			0.26		0.08		0.07	
Oper. time red.	0.98		0.98			0.98		0.98		0.98	
Wind dir. red.	0.65		0.65			0.63		0.60		0.60	
Total reduction	0.31		0.31			0.15		0.05		0.04	
Total, real	61		309			52		53		59	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalnmuiža - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (28)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

		January	February	March	April	May	June		July		August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:32 20:55	04:36 21:52		04:30 22:09	20	05:07 (B12) 21:28 (B24)	05:16 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54		04:31 22:08	18	05:08 (B12) 21:28 (B24)	05:18 21:26	06:19 20:11	07:19 18:51	07:24 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55		04:32 22:08	15	05:09 (B12) 21:28 (B24)	05:19 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	21:17 (B24)	04:33 22:07	12	05:10 (B12) 21:27 (B24)	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	21:15 (B24)	04:34 22:06	8	21:19 (B24) 21:27 (B24)	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	21:14 (B24)	04:35 22:06	6	21:20 (B24) 21:26 (B24)	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	21:13 (B24)	04:36 22:05	5	21:21 (B24) 21:26 (B24)	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	05:05 (B12)	04:37 22:04	2	21:23 (B24) 21:25 (B24)	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 22:02	05:04 (B12)	04:38 22:03	13	05:04 (B12) 21:22 (B24)	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 22:03	05:04 (B12)	04:39 22:02	16	05:04 (B12) 21:23 (B24)	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:15	04:27 22:04	05:03 (B12)	04:41 22:01	19	05:03 (B12) 21:24 (B24)	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:08 21:17	04:27 22:05	05:03 (B12)	04:42 22:00	21	05:03 (B12) 21:25 (B24)	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	05:03 (B12)	04:43 21:59	22	05:03 (B12) 21:26 (B24)	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	05:03 (B12)	04:45 21:58	24	05:03 (B12) 21:27 (B24)	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	05:02 (B12)	04:46 21:56	25	05:02 (B12) 21:26 (B24)	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:26 22:08	05:02 (B12)	04:48 21:55	26	05:02 (B12) 21:27 (B24)	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	05:02 (B12)	04:49 21:54	28	05:02 (B12) 21:28 (B24)	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	05:02 (B12)	04:51 21:52	27	05:02 (B12) 21:28 (B24)	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	05:02 (B12)	04:53 21:51	27	05:02 (B12) 21:28 (B24)	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	05:02 (B12)	04:54 21:49	29	05:02 (B12) 21:29 (B24)	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	05:03 (B12)	04:56 21:48	29	05:03 (B12) 21:30 (B24)	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	05:03 (B12)	04:57 21:46	29	05:03 (B12) 21:30 (B24)	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	05:03 (B12)	04:59 21:44	27	05:03 (B12) 21:29 (B24)	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:04 (B12)	05:01 21:43	27	05:04 (B12) 21:30 (B24)	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:04 (B12)	05:03 21:41	28	05:04 (B12) 21:30 (B24)	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 (B12)	05:05 21:39	26	05:04 (B12) 21:29 (B24)	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:05 (B12)	05:06 21:37	26	05:05 (B12) 21:30 (B24)	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:05 (B12)	05:08 21:35	24	05:05 (B12) 21:29 (B24)	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:06 (B12)	05:10 21:33	23	05:06 (B12) 21:29 (B24)	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:07 (B12)	05:12 21:32	22	05:07 (B12) 21:29 (B24)	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51			05:14 21:30			06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	567	529	86		469	384	324	248	216
Total, worst case							0.56		0.49						
Sun reduction							0.98		0.98						
Oper. time red.							0.63		0.62						
Wind dir. red.							0.34		0.30						
Total reduction							194		26						
Total, real															

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalnsetas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (8)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalnvidi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (48)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	05:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalnares - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (43)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	08:14 (B1)	06:49	05:32
	15:48	16:45	17:47	20	08:34 (B1)	19:53
2	08:51	08:13	07:08	08:15 (B1)	06:46	20:55
	15:49	16:47	17:50	17	08:32 (B1)	19:55
3	08:50	08:11	07:06	08:18 (B1)	06:43	20:58
	15:50	16:50	17:52	11	08:29 (B1)	19:57
4	08:50	08:09	07:03		06:41	20:58
	15:52	16:52	17:54		19:59	21:02
5	08:49	08:07	07:00		06:38	20:53
	15:53	16:54	17:56		20:01	21:04
6	08:49	08:05	06:58		06:35	20:52
	15:55	16:56	17:58		20:03	21:06
7	08:48	08:03	06:55		06:33	20:51
	15:56	16:59	18:00		20:05	21:08
8	08:48	08:01	06:53		06:30	20:57
	15:58	17:01	18:03		20:08	21:10
9	08:47	07:58	06:50		06:27	20:55
	15:59	17:03	18:05		20:10	21:12
10	08:46	07:56	06:47		06:25	20:52
	16:01	17:05	18:07		20:12	21:14
11	08:45	07:54	06:45		06:22	20:51
	16:03	17:08	18:09		20:14	21:16
12	08:44	07:52	06:42		06:20	20:50
	16:04	17:10	18:11		20:16	2
13	08:43	07:50	08:20 (B1)	06:39	06:17	06:45 (B17)
	16:06	17:12	12	08:32 (B1)	18:13	2
14	08:42	07:47	08:17 (B1)	06:37	06:14	06:47 (B17)
	16:08	17:14	17	08:34 (B1)	18:15	7
15	08:41	07:45	08:15 (B1)	06:34	06:12	06:50 (B17)
	16:10	17:17	21	08:36 (B1)	18:17	11
16	08:40	07:43	08:13 (B1)	06:32	06:09	06:51 (B17)
	16:12	17:19	23	08:36 (B1)	18:20	15
17	08:39	07:40	08:13 (B1)	06:29	06:07	06:53 (B17)
	16:14	17:21	25	08:38 (B1)	18:22	18
18	08:38	07:38	08:12 (B1)	06:26	06:04	06:54 (B17)
	16:16	17:23	26	08:38 (B1)	18:24	21
19	08:36	07:35	08:12 (B1)	06:24	06:02	06:53 (B17)
	16:18	17:25	27	08:39 (B1)	18:26	21
20	08:35	07:33	08:11 (B1)	06:21	05:59	06:54 (B17)
	16:20	17:28	28	08:39 (B1)	18:28	22
21	08:33	07:31	08:11 (B1)	06:18	05:57	06:53 (B17)
	16:22	17:30	29	08:40 (B1)	18:30	22
22	08:32	07:28	08:10 (B1)	06:15	05:54	06:53 (B17)
	16:24	17:32	29	08:39 (B1)	18:32	20
23	08:30	07:26	08:11 (B1)	06:13	05:52	06:52 (B17)
	16:26	17:34	29	08:40 (B1)	18:34	19
24	08:29	07:23	08:10 (B1)	06:10	05:49	06:51 (B17)
	16:28	17:37	29	08:39 (B1)	18:36	17
25	08:27	07:21	08:10 (B1)	06:07	05:47	06:50 (B17)
	16:30	17:39	28	08:38 (B1)	18:38	15
26	08:26	07:18	08:11 (B1)	06:05	05:44	06:49 (B17)
	16:32	17:41	27	08:38 (B1)	18:40	11
27	08:24	07:16	08:11 (B1)	06:02	05:42	06:46 (B17)
	16:34	17:43	26	08:37 (B1)	18:43	5
28	08:22	07:13	08:13 (B1)	05:59	05:39	06:43 (B17)
	16:36	17:45	23	08:36 (B1)	18:45	21
29	08:20			06:57	05:37	04:41
	16:39			19:47	20:51	21:47
30	08:19			06:54	05:35	04:38
	16:41			19:49	20:53	21:50
31	08:17			06:51		04:37
	16:43			19:51		21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		399	48	247		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.62	0.62	0.65		
Total reduction		0.12	0.25	0.32		
Total, real		48	12	78		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalnares - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (43)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	04:31 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:55 (B1) 09:01 (B1)	07:42 16:17
11	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:51 (B1) 09:05 (B1)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:48 (B1) 09:07 (B1)	07:46 16:13
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:46 (B1) 09:08 (B1)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	08:44 (B1) 09:09 (B1)	07:51 16:09
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:44 (B1) 09:10 (B1)	07:53 16:07
16	04:48 21:55	05:45 20:54	06:47 (B17) 06:52 (B17)	07:48 18:14	08:43 (B1) 09:10 (B1)	07:55 16:06
17	04:49 21:54	05:47 20:52	06:41 (B17) 06:53 (B17)	07:50 18:12	08:42 (B1) 09:10 (B1)	07:57 16:04
18	04:51 21:53	05:49 20:50	06:39 (B17) 06:55 (B17)	07:52 18:09	08:41 (B1) 09:10 (B1)	07:59 16:02
19	04:52 21:51	05:51 20:47	06:38 (B17) 06:56 (B17)	07:53 18:07	08:42 (B1) 09:11 (B1)	08:01 16:01
20	04:54 21:49	05:53 20:45	06:37 (B17) 06:57 (B17)	07:55 18:04	08:41 (B1) 09:10 (B1)	08:03 15:59
21	04:56 21:48	05:55 20:42	06:37 (B17) 06:57 (B17)	07:59 18:02	08:41 (B1) 09:10 (B1)	08:05 15:58
22	04:57 21:46	05:57 20:40	06:36 (B17) 06:57 (B17)	08:01 17:59	08:41 (B1) 09:09 (B1)	08:07 15:56
23	04:59 21:45	05:59 20:37	06:36 (B17) 06:57 (B17)	08:03 17:57	08:42 (B1) 09:09 (B1)	08:09 15:55
24	05:01 21:43	06:01 20:35	06:36 (B17) 06:57 (B17)	08:05 17:55	08:42 (B1) 09:08 (B1)	08:11 15:53
25	05:03 21:41	06:03 20:32	06:36 (B17) 06:57 (B17)	08:07 17:52	07:43 (B1) 08:07 (B1)	08:13 15:52
26	05:04 21:39	06:05 20:30	06:35 (B17) 06:55 (B17)	08:07 17:50	07:44 (B1) 08:06 (B1)	08:15 15:51
27	05:06 21:38	06:07 20:27	06:37 (B17) 06:55 (B17)	08:09 17:47	07:45 (B1) 08:05 (B1)	08:17 15:49
28	05:08 21:36	06:09 20:24	06:39 (B17) 06:54 (B17)	08:11 17:45	07:46 (B1) 08:03 (B1)	08:19 15:48
29	05:10 21:34	06:11 20:22	06:41 (B17) 06:52 (B17)	08:13 17:43	07:50 (B1) 08:01 (B1)	08:21 15:47
30	05:12 21:32	06:13 20:19	06:43 (B17) 06:50 (B17)	08:15 17:40	08:22 15:46	08:51 15:45
31	05:14 21:30	06:15 20:17	06:45 (B17) 06:47 (B17)	08:17 17:38	08:51 15:47	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		250		458		
Sun reduction		0.50		0.26		
Oper. time red.		0.98		0.98		
Wind dir. red.		0.65		0.62		
Total reduction		0.32		0.16		
Total, real		79		71		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalvani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (207)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:47	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	08:31 15:41
6	08:49 15:54	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:09	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:16	05:08 21:17	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:06	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:16	07:53 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:44 15:37
17	08:39 16:13	07:40 17:21	06:28 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:03	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:24 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:25	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:20 18:28	05:59 20:32	04:53 21:33	04:24 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:55	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:56	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:43	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:40	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:50 15:41
27	08:24 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:07 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:21	07:13 18:58	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kaupernieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (155)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	05:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kaupres - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (126)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:50 15:48	08:15 16:45	07:11 17:47	07:47 (B12) 17:17 (B24)	06:49 19:53	07:27 (B11) 20:55
2	08:50 15:49	08:13 16:47	07:08 17:50	07:46 (B12) 17:20 (B24)	06:46 19:55	07:25 (B11) 20:57
3	08:50 15:51	08:11 16:50	07:05 17:52	07:46 (B12) 17:23 (B24)	06:43 19:57	07:24 (B11) 20:59
4	08:50 15:52	08:09 16:52	07:03 17:54	07:46 (B12) 17:25 (B24)	06:41 19:59	07:24 (B11) 21:01
5	08:49 15:53	08:07 16:54	07:00 17:56	07:45 (B12) 17:25 (B24)	06:38 20:01	07:23 (B11) 21:03
6	08:49 15:55	08:05 16:56	06:58 17:58	07:46 (B12) 17:26 (B24)	06:35 20:03	07:23 (B11) 21:05
7	08:48 15:56	08:02 16:59	06:55 18:00	07:46 (B12) 17:26 (B24)	06:33 20:05	07:22 (B11) 21:08
8	08:47 15:58	08:00 17:01	06:53 18:03	07:46 (B12) 17:26 (B24)	06:30 20:07	07:22 (B11) 21:10
9	08:47 15:59	07:58 17:03	06:50 18:05	07:47 (B12) 17:26 (B24)	06:27 20:09	07:22 (B11) 21:12
10	08:46 16:01	07:56 17:05	06:47 18:07	07:48 (B12) 17:26 (B24)	06:25 20:12	07:22 (B11) 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	07:49 (B12) 17:25 (B24)	06:22 20:14	07:23 (B11) 21:16
12	08:44 16:04	07:52 17:10	06:42 18:11	07:50 (B12) 17:23 (B24)	06:20 20:16	07:23 (B11) 21:18
13	08:43 16:06	07:49 17:12	06:39 18:13	07:55 (B12) 17:23 (B24)	06:17 20:18	07:24 (B11) 21:19
14	08:42 16:08	07:47 17:14	06:37 18:15	07:54 (B12) 17:21 (B24)	06:14 20:20	07:24 (B11) 21:21
15	08:41 16:10	07:45 17:16	06:34 18:17	07:56 (B12) 17:18 (B24)	06:12 20:22	07:26 (B11) 21:23
16	08:40 16:12	07:42 17:19	06:31 18:19	07:57 (B12) 17:11 (B24)	06:09 20:24	07:27 (B11) 21:25
17	08:39 16:14	07:40 17:21	06:29 18:22	07:58 (B12) 17:14 (B24)	06:07 20:26	07:29 (B11) 21:27
18	08:37 16:16	07:38 17:23	06:26 18:24	07:59 (B12) 17:16 (B24)	06:04 20:28	07:32 (B11) 21:29
19	08:36 16:18	07:35 17:25	06:23 18:26	07:59 (B12) 17:18 (B24)	06:02 20:30	07:33 (B11) 21:31
20	08:35 16:20	07:33 17:28	06:21 18:28	07:59 (B12) 17:20 (B24)	05:59 20:32	07:34 (B11) 21:33
21	08:33 16:22	07:30 17:30	06:18 18:30	07:59 (B12) 17:22 (B24)	05:57 20:34	07:35 (B11) 21:35
22	08:32 16:24	07:28 17:32	06:15 18:32	07:59 (B12) 17:24 (B24)	05:54 20:37	07:36 (B11) 21:36
23	08:30 16:26	07:26 17:34	06:13 18:34	07:59 (B12) 17:26 (B24)	05:52 20:39	07:37 (B11) 21:38
24	08:29 16:28	07:23 17:36	06:10 18:36	07:59 (B12) 17:28 (B24)	05:49 20:41	07:38 (B11) 21:40
25	08:27 16:30	07:21 17:39	06:07 18:38	07:59 (B12) 17:30 (B24)	05:47 20:43	07:39 (B11) 21:41
26	08:25 16:32	07:18 17:41	06:05 18:40	07:59 (B12) 17:32 (B24)	05:44 20:45	07:40 (B11) 21:43
27	08:24 16:34	07:16 17:43	06:02 18:42	07:59 (B12) 17:34 (B24)	05:42 20:47	07:41 (B11) 21:44
28	08:22 16:36	07:13 17:45	05:59 18:45	07:59 (B12) 17:36 (B24)	05:39 20:49	07:42 (B11) 21:46
29	08:20 16:39	07:11 17:47	05:57 19:47	07:59 (B12) 17:38 (B24)	05:37 20:51	07:43 (B11) 21:48
30	08:18 16:41	07:09 17:49	05:54 19:49	07:59 (B12) 17:40 (B24)	05:35 20:53	07:44 (B11) 21:49
31	08:16 16:43	07:07 17:51	05:51 19:51	07:59 (B12) 17:42 (B24)	05:33 20:55	07:45 (B11) 21:51
Potential sun hours	235	266	366	426	508	528
Total, worst case		710	690	520	354	695
Sun reduction		0.20	0.41	0.50	0.57	0.56
Oper. time red.		0.98	0.98	0.98	0.98	0.98
Wind dir. red.		0.66	0.64	0.65	0.63	0.67
Total reduction		0.13	0.26	0.32	0.35	0.37
Total, real		93	179	167	123	255

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kaupres - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (126)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:14 (B18) 21:28	05:16 20:21 (B22)	06:17 20:14	07:22 (B11) 18:53	08:32 (B12) 16:36
2	04:31 22:08	05:15 (B18) 21:26	05:17 20:21 (B22)	06:19 20:11	07:21 (B11) 18:51	08:29 (B12) 16:34
3	04:32 22:08	05:16 (B18) 21:24	05:19 20:21 (B22)	06:21 20:09	07:20 (B11) 18:48	08:26 (B12) 16:31
4	04:33 22:07	05:16 (B18) 21:21	05:21 20:22 (B22)	06:23 20:06	07:19 (B11) 18:45	08:25 (B12) 16:29
5	04:34 22:06	05:17 (B18) 21:19	05:23 20:21 (B22)	06:25 20:03	07:18 (B11) 18:43	08:23 (B12) 16:27
6	04:35 22:06	05:18 (B18) 21:17	05:25 20:21 (B22)	06:27 20:01	07:18 (B11) 18:40	08:22 (B12) 16:25
7	04:36 22:05	05:18 (B18) 21:15	05:27 20:22 (B22)	06:29 19:58	07:18 (B11) 18:38	08:21 (B12) 16:23
8	04:37 22:04	05:19 (B18) 21:13	05:29 20:23 (B22)	06:31 19:55	07:18 (B11) 18:35	08:21 (B12) 16:21
9	04:38 22:03	05:20 (B18) 21:11	05:31 20:24 (B22)	06:33 19:53	07:18 (B11) 18:32	08:20 (B12) 16:19
10	04:39 22:02	05:21 (B18) 21:08	05:33 20:24 (B22)	06:35 19:50	07:19 (B11) 18:30	08:21 (B12) 16:17
11	04:41 22:01	05:22 (B18) 21:06	05:35 20:26 (B22)	06:37 19:47	07:19 (B11) 18:27	08:20 (B12) 16:15
12	04:42 22:00	05:25 (B18) 21:04	05:37 20:29 (B22)	06:39 19:45	07:20 (B11) 18:25	08:20 (B12) 16:13
13	04:43 21:59	05:33 (B18) 21:01	05:39 20:31 (B22)	06:41 19:42	07:21 (B11) 18:22	08:20 (B12) 16:11
14	04:45 21:58	05:41 20:59	05:41 20:59	06:43 19:39	07:22 (B11) 18:19	08:21 (B12) 16:09
15	04:46 21:56	05:43 20:57	05:43 20:57	06:45 19:37	07:23 (B11) 18:17	08:21 (B12) 16:07
16	04:48 21:55	05:45 20:54	05:45 20:54	06:47 19:34	07:26 (B11) 18:14	08:23 (B12) 16:06
17	04:49 21:54	05:47 20:52	05:47 20:52	06:49 19:31	07:39 (B11) 18:12	08:24 (B12) 16:04
18	04:51 21:52	05:49 20:49	05:49 20:49	06:51 19:28	07:52 18:09	08:26 (B12) 16:02
19	04:52 21:51	05:51 20:47	05:51 20:47	06:53 19:26	07:54 18:07	16:24 (B25) 16:01
20	04:54 21:49	05:53 20:44	05:53 20:44	06:55 19:23	07:56 18:04	16:24 (B25) 15:59
21	04:56 21:48	05:55 20:42	05:55 20:42	06:57 19:20	07:59 18:02	16:23 (B25) 15:58
22	04:57 21:46	05:57 20:39	05:57 20:39	06:59 19:18	08:01 17:59	16:22 (B25) 15:56
23	04:59 21:44	20:28 (B22) 20:36 (B22)	05:59 20:37	07:01 19:15	08:03 17:57	16:22 (B25) 15:55
24	05:01 21:43	20:27 (B22) 20:38 (B22)	06:01 20:34	07:03 19:12	08:05 17:54	16:21 (B25) 15:53
25	05:03 21:41	20:25 (B22) 20:39 (B22)	06:03 20:32	07:05 19:10	07:07 16:52	15:21 (B25) 15:52
26	05:04 21:39	20:24 (B22) 20:40 (B22)	06:05 20:29	07:07 19:07	07:09 16:50	15:20 (B25) 15:51
27	05:06 21:37	20:24 (B22) 20:42 (B22)	06:07 20:27	07:09 19:04	07:12 16:47	15:21 (B25) 15:49
28	05:08 21:35	20:23 (B22) 20:41 (B22)	06:09 20:24	07:11 19:01	17:48 (B24) 17:58 (B24)	15:21 (B25) 15:48
29	05:10 21:34	20:22 (B22) 20:42 (B22)	06:11 20:22	07:13 18:59	17:45 (B24) 18:00 (B24)	15:22 (B25) 15:47
30	05:12 21:32	20:22 (B22) 20:43 (B22)	06:13 20:19	07:15 18:56	17:44 (B24) 18:02 (B24)	15:22 (B25) 15:46
31	05:14 21:30	20:22 (B22) 20:44 (B22)	06:15 20:16	07:23 (B11) 07:53 (B11)	07:20 16:38	15:23 (B25) 15:51 (B25)
Potential sun hours	529	469	385	324	247	216
Total, worst case	371	361	521	1159	108	
Sun reduction	0.49	0.50	0.43	0.26	0.08	
Oper. time red.	0.98	0.98	0.98	0.98	0.98	
Wind dir. red.	0.65	0.64	0.65	0.65	0.67	
Total reduction	0.31	0.31	0.27	0.17	0.05	
Total, real	117	112	143	191	6	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kaupres 1 - Shadow Receptor: 1.0 × 1.0  
Assumptions for shadow calculations

Azimuth: 0.0° Slope: 90.0° (127)

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:50 15:48	08:15 16:45	07:11 17:47	07:48 (B12) 19:53	07:28 (B11) 20:55	20:16 (B22) 21:52
2	08:50 15:49	08:13 16:47	07:08 17:50	07:48 (B12) 19:55	07:26 (B11) 20:57	20:15 (B22) 21:54
3	08:50 15:51	08:11 16:50	07:05 17:52	07:48 (B12) 19:57	07:25 (B11) 20:59	20:13 (B22) 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	07:47 (B12) 19:59	07:25 (B11) 21:01	20:12 (B22) 21:56
5	08:49 15:53	08:07 16:54	07:00 17:56	07:47 (B12) 20:01	07:24 (B11) 21:03	20:12 (B22) 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	07:48 (B12) 20:03	07:24 (B11) 21:05	20:11 (B22) 21:59
7	08:48 15:56	08:02 16:59	06:55 18:00	07:48 (B12) 20:05	07:23 (B11) 21:08	20:11 (B22) 22:00
8	08:47 15:58	08:00 17:01	06:53 18:03	07:48 (B12) 20:07	07:23 (B11) 21:10	20:10 (B22) 22:01
9	08:47 15:59	07:58 17:03	06:50 18:05	07:49 (B12) 20:09	07:23 (B11) 21:12	20:10 (B22) 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	07:50 (B12) 20:12	07:23 (B11) 21:14	20:10 (B22) 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	07:51 (B12) 20:14	07:24 (B11) 21:16	20:10 (B22) 22:04
12	08:44 16:04	07:52 17:10	06:42 18:11	07:53 (B12) 20:16	07:24 (B11) 21:18	20:10 (B22) 22:05
13	08:43 16:06	07:49 17:12	06:39 18:13	17:04 (B24) 20:18	07:25 (B11) 21:19	20:10 (B22) 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	17:05 (B24) 20:20	07:25 (B11) 21:21	20:11 (B22) 22:06
15	08:41 16:10	07:45 17:16	06:34 18:17	17:07 (B24) 20:22	07:27 (B11) 21:23	20:12 (B22) 22:07
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	07:28 (B11) 21:25	20:12 (B22) 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	07:30 (B11) 21:27	20:14 (B22) 22:08
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	07:33 (B11) 21:29	20:15 (B22) 22:09
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	07:41 (B11) 21:31	20:16 (B22) 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	20:19 (B22) 22:09
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:35	04:25 22:10
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:25 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34	07:16 17:43	06:02 18:42	06:37 (B11) 20:47	04:42 21:45	04:27 22:10
28	08:22 16:36	07:13 17:45	05:59 18:45	06:34 (B11) 20:49	04:41 21:46	04:28 22:10
29	08:20 16:39		06:57 19:47	07:32 (B11) 20:51	04:39 21:48	04:28 22:09
30	08:18 16:41		06:54 19:49	07:30 (B11) 20:53	04:38 21:49	04:29 22:09
31	08:16 16:43		06:51 19:51	07:28 (B11) 20:57	04:37 21:51	
Potential sun hours	235	266	366	426	508	528
Total, worst case		705	680	529	334	666
Sun reduction		0.20	0.41	0.50	0.57	0.56
Oper. time red.		0.98	0.98	0.98	0.98	0.98
Wind dir. red.		0.66	0.64	0.65	0.63	0.67
Total reduction		0.13	0.26	0.32	0.35	0.37
Total, real		92	176	169	116	244

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kaupres 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (127)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

July			August			September			October			November			December		
1	04:30	05:14 (B18)	05:16	20:20 (B22)	06:17	07:23 (B11)	07:17	08:35 (B12)	07:22	15:26 (B25)	08:24						
2	22:09	23 05:37 (B18)	21:28	22 20:42 (B22)	20:14	32 07:55 (B11)	18:53	28 18:03 (B24)	16:36	25 15:51 (B25)	15:45						
3	04:31	05:15 (B18)	05:17	20:20 (B22)	06:19	07:22 (B11)	07:19	08:31 (B12)	07:25	15:26 (B25)	08:26						
4	22:08	22 05:37 (B18)	21:26	22 20:42 (B22)	20:11	34 07:56 (B11)	18:51	36 18:03 (B24)	16:34	24 15:50 (B25)	15:44						
5	04:32	05:15 (B18)	05:19	20:20 (B22)	06:21	07:21 (B11)	07:21	08:29 (B12)	07:27	15:27 (B25)	08:27						
6	22:08	22 05:37 (B18)	21:24	22 20:42 (B22)	20:09	35 07:56 (B11)	18:48	41 18:03 (B24)	16:31	21 15:48 (B25)	15:43						
7	04:33	05:16 (B18)	05:21	20:20 (B22)	06:23	07:20 (B11)	07:23	08:27 (B12)	07:29	15:30 (B25)	08:29						
8	22:07	21 05:37 (B18)	21:21	22 20:42 (B22)	20:06	35 07:55 (B11)	18:45	45 18:03 (B24)	16:29	17 15:47 (B25)	15:42						
9	04:34	05:17 (B18)	05:23	20:20 (B22)	06:25	07:19 (B11)	07:25	08:25 (B12)	07:31	15:32 (B25)	08:31						
10	22:06	20 05:37 (B18)	21:19	21 20:41 (B22)	20:03	36 07:55 (B11)	18:43	49 18:03 (B24)	16:27	12 15:44 (B25)	15:42						
11	04:35	05:18 (B18)	05:25	20:20 (B22)	06:27	07:19 (B11)	07:27	08:24 (B12)	07:33		08:32						
12	22:06	19 05:37 (B18)	21:17	21 20:41 (B22)	20:01	35 07:54 (B11)	18:40	49 18:02 (B24)	16:25		15:41						
13	04:36	05:19 (B18)	05:27	20:21 (B22)	06:29	07:19 (B11)	07:29	08:23 (B12)	07:35		08:34						
14	22:05	17 05:36 (B18)	21:15	20 20:41 (B22)	19:58	35 07:54 (B11)	18:38	50 18:02 (B24)	16:23		15:40						
15	04:37	05:19 (B18)	05:29	20:21 (B22)	06:31	07:19 (B11)	07:31	08:22 (B12)	07:38		08:35						
16	22:04	17 05:36 (B18)	21:13	19 20:40 (B22)	19:55	35 07:54 (B11)	18:35	50 18:01 (B24)	16:21		15:40						
17	04:38	05:20 (B18)	05:31	20:22 (B22)	06:33	07:19 (B11)	07:33	08:22 (B12)	07:40		08:36						
18	22:03	15 05:35 (B18)	21:11	16 20:38 (B22)	19:53	34 07:53 (B11)	18:32	48 18:00 (B24)	16:19		15:39						
19	04:39	05:22 (B18)	05:33	20:22 (B22)	06:35	07:19 (B11)	07:36	08:22 (B12)	07:42		08:38						
20	22:02	11 05:33 (B18)	21:08	13 20:35 (B22)	19:50	33 07:52 (B11)	18:30	47 17:59 (B24)	16:17		15:39						
21	04:41	05:23 (B18)	05:35	20:23 (B22)	06:37	07:20 (B11)	07:38	08:22 (B12)	07:44		08:39						
22	22:01	9 05:32 (B18)	21:06	10 20:33 (B22)	19:47	31 07:51 (B11)	18:27	42 17:56 (B24)	16:15		15:38						
23	04:42		05:37	20:26 (B22)	06:39	07:20 (B11)	07:40	08:22 (B12)	07:46		08:40						
24	22:00		21:04	5 20:31 (B22)	19:45	30 07:50 (B11)	18:25	37 17:53 (B24)	16:13		15:38						
25	04:43		05:39		06:41	07:21 (B11)	07:42	08:22 (B12)	07:48		08:41						
26	21:59		21:01		19:42	27 07:48 (B11)	18:22	27 08:49 (B12)	16:11		15:38						
27	04:45		05:41		06:43	07:22 (B11)	07:44	08:22 (B12)	07:50		08:42						
28	21:58		20:59		19:39	25 07:47 (B11)	18:19	33 16:44 (B25)	16:09		15:38						
29	04:46		05:43		06:45	07:24 (B11)	07:46	08:22 (B12)	07:53		08:43						
30	21:56		20:57		19:37	21 07:45 (B11)	18:17	41 16:48 (B25)	16:07		15:38						
31	04:48		05:45		06:47	07:26 (B11)	07:48	08:24 (B12)	07:55		08:44						
32	21:55		20:54		19:34	16 07:42 (B11)	18:14	43 16:51 (B25)	16:06		15:38						
33	04:49		05:47		06:49	07:31 (B11)	07:50	08:25 (B12)	07:57		08:45						
34	21:54		20:52		19:31	6 07:37 (B11)	18:12	43 16:52 (B25)	16:04		15:38						
35	04:51		05:49		06:51		07:52	08:26 (B12)	07:59		08:46						
36	21:52		20:49		19:28		18:09	41 16:52 (B25)	16:02		15:38						
37	04:52		05:51		06:53		07:54	08:29 (B12)	08:01		08:47						
38	21:51		20:47		19:26		18:07	37 16:53 (B25)	16:01		15:38						
39	04:54		05:53		06:55		07:56	16:25 (B25)	08:03		08:48						
40	21:49		20:44		19:23		18:04	29 16:54 (B25)	15:59		15:39						
41	04:56		05:55		06:57		07:59	16:24 (B25)	08:05		08:48						
42	21:48		20:42		19:20		18:02	30 16:54 (B25)	15:58		15:39						
43	04:57		05:57		06:59		08:01	16:23 (B25)	08:07		08:49						
44	21:46		20:39		19:18		17:59	31 16:54 (B25)	15:56		15:39						
45	04:59		05:59		07:01		08:03	16:23 (B25)	08:09		08:49						
46	21:44		20:37		19:15		17:57	32 16:55 (B25)	15:55		15:40						
47	05:01		06:01		07:03		08:05	16:23 (B25)	08:11		08:50						
48	21:43	7 20:35 (B22)	20:34		19:12		17:54	32 16:55 (B25)	15:53		15:40						
49	05:03		06:03		07:05		07:07	15:22 (B25)	08:13		15:41						
50	21:41	11 20:36 (B22)	20:32	10 07:45 (B11)	19:10		16:52	33 15:55 (B25)	15:52		15:41						
51	05:04		06:05		07:07		07:09	15:22 (B25)	08:15		08:50						
52	21:39	14 20:38 (B22)	20:29	16 07:48 (B11)	19:07		16:50	32 15:54 (B25)	15:51		15:42						
53	05:06		06:07		07:09		07:12	15:22 (B25)	08:17		08:51						
54	21:37	16 20:40 (B22)	20:27	21 07:50 (B11)	19:04		16:47	32 15:54 (B25)	15:49		15:43						
55	05:08		06:09		07:11		17:49 (B24)	07:14	15:22 (B25)		08:19						
56	21:35	18 20:40 (B22)	20:24	25 07:52 (B11)	19:01	8 17:57 (B24)	16:45	32 15:54 (B25)	15:48		15:44						
57	05:10		06:11		07:13		17:46 (B24)	07:16	15:23 (B25)		08:20						
58	21:34	19 20:41 (B22)	20:22	27 07:53 (B11)	18:59	14 18:00 (B24)	16:43	31 15:54 (B25)	15:47		15:45						
59	05:12		06:13		07:15		17:45 (B24)	07:18	15:24 (B25)		08:22						
60	21:32	20 20:41 (B22)	20:19	29 07:54 (B11)	18:56	17 18:02 (B24)	16:40	29 15:53 (B25)	15:46		15:46						
61	05:14		06:15		07:24 (B11)		07:20	15:24 (B25)			08:51						
62	21:30	21 20:42 (B22)	20:16	31 07:55 (B11)			16:38	28 15:52 (B25)			15:47						
Potential sun hours	529		469		385		324		247		216						
Total, worst case	322		372		539		1158		99								
Sun reduction	0.49		0.50		0.43		0.26		0.08								
Oper. time red.	0.98		0.98		0.98		0.98		0.98								
Wind dir. red.	0.65		0.64		0.65		0.65		0.67								
Total reduction	0.31		0.31		0.27		0.17		0.05								
Total, real	101		116		148		191		5								

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Krasta Ozoli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (9)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January		February		March	April	May		June	
1	08:51		12:33 (B22)	08:15	07:11	06:49		05:32	06:29 (B1)	04:36
	15:48	12	12:45 (B22)	16:45	17:47	19:53		20:55	07:03 (B1)	21:53
2	08:50		12:34 (B22)	08:13	07:08	06:46		05:30	06:29 (B1)	04:35
	15:49	11	12:45 (B22)	16:47	17:50	19:55		20:57	07:02 (B1)	21:54
3	08:50		12:36 (B22)	08:11	07:06	06:43		05:28	06:29 (B1)	04:34
	15:51	8	12:44 (B22)	16:50	17:52	19:57		21:00	07:02 (B1)	21:55
4	08:50		12:39 (B22)	08:09	07:03	06:41		05:26	06:30 (B1)	04:33
	15:52	1	12:40 (B22)	16:52	17:54	19:59		21:02	07:01 (B1)	21:57
5	08:49			08:07	07:00	06:38		05:23	06:30 (B1)	04:32
	15:53			16:54	17:56	20:01		21:04	07:01 (B1)	21:58
6	08:49			08:05	06:58	06:35		05:21	06:31 (B1)	04:31
	15:55			16:56	17:58	20:03		21:06	07:00 (B1)	21:59
7	08:48			08:03	06:55	06:33		05:19	06:32 (B1)	04:30
	15:56			16:59	18:00	20:05		21:08	06:59 (B1)	22:00
8	08:48			08:00	06:53	06:30		05:17	06:32 (B1)	04:29
	15:58			17:01	18:03	20:08		21:10	06:58 (B1)	22:01
9	08:47			07:58	06:50	06:27		05:15	06:33 (B1)	04:28
	15:59			17:03	18:05	20:10		21:12	06:57 (B1)	22:02
10	08:46			07:56	06:47	06:25		05:13	06:35 (B1)	04:28
	16:01			17:05	18:07	20:12		21:14	06:55 (B1)	22:03
11	08:45			07:54	06:45	06:22		05:10	06:36 (B1)	04:27
	16:03			17:08	18:09	20:14		21:16	06:53 (B1)	22:04
12	08:44			07:52	06:42	06:20		05:08	06:38 (B1)	04:27
	16:04			17:10	18:11	20:16		21:18	06:51 (B1)	22:05
13	08:43			07:49	06:39	06:17		05:06	06:42 (B1)	04:26
	16:06			17:12	18:13	20:18		21:20	06:46 (B1)	22:06
14	08:42			07:47	06:37	06:14		05:04		04:26
	16:08			17:14	18:15	20:20		21:22		22:07
15	08:41			07:45	06:34	06:12		05:02		04:26
	16:10			17:17	18:17	20:22		21:24		22:07
16	08:40			07:43	06:32	06:09	06:47 (B1)	05:01		04:25
	16:12			17:19	18:20	20:24	4	06:51 (B1)	21:25	22:08
17	08:39			07:40	06:29	06:07		06:42 (B1)	04:59	04:25
	16:14			17:21	18:22	20:26	14	06:56 (B1)	21:27	22:08
18	08:37			07:38	06:26	06:04		06:38 (B1)	04:57	04:25
	16:16			17:23	18:24	20:28	20	06:58 (B1)	21:29	22:09
19	08:36			07:35	06:24	06:02		06:37 (B1)	04:55	04:25
	16:18			17:25	18:26	20:30	23	07:00 (B1)	21:31	22:09
20	08:35			07:33	06:21	05:59		06:35 (B1)	04:53	04:25
	16:20			17:28	18:28	20:33	25	07:00 (B1)	21:33	22:10
21	08:33			07:31	06:18	05:57		06:34 (B1)	04:52	04:25
	16:22			17:30	18:30	20:35	28	07:02 (B1)	21:35	22:10
22	08:32			07:28	06:15	05:54		06:33 (B1)	04:50	04:25
	16:24			17:32	18:32	20:37	30	07:03 (B1)	21:37	22:10
23	08:30			07:26	06:13	05:52		06:31 (B1)	04:48	04:26
	16:26			17:34	18:34	20:39	32	07:03 (B1)	21:38	22:10
24	08:29			07:23	06:10	05:49		06:31 (B1)	04:47	04:26
	16:28			17:37	18:36	20:41	32	07:03 (B1)	21:40	22:10
25	08:27			07:21	06:07	05:47		06:31 (B1)	04:45	04:26
	16:30			17:39	18:38	20:43	33	07:04 (B1)	21:42	22:10
26	08:26			07:18	06:05	05:44		06:29 (B1)	04:44	04:27
	16:32			17:41	18:40	20:45	34	07:03 (B1)	21:43	22:10
27	08:24			07:16	06:02	05:42		06:29 (B1)	04:42	04:27
	16:34			17:43	18:43	20:47	35	07:04 (B1)	21:45	22:10
28	08:22			07:13	05:59	05:40		06:29 (B1)	04:41	04:28
	16:36			17:45	18:45	20:49	35	07:04 (B1)	21:47	22:10
29	08:20				06:57	05:37		06:29 (B1)	04:39	04:28
	16:39				19:47	20:51	35	07:04 (B1)	21:48	22:10
30	08:18				06:54	05:35		06:28 (B1)	04:38	04:29
	16:41				19:49	20:53	35	07:03 (B1)	21:50	22:09
31	08:17				06:51				04:37	
	16:43				19:51				21:51	
Potential sun hours	235			266	366	426		508		529
Total, worst case		32				415		322		
Sun reduction		0.13				0.50		0.57		
Oper. time red.		0.98				0.98		0.98		
Wind dir. red.		0.64				0.65		0.65		
Total reduction		0.08				0.32		0.36		
Total, real		3				132		117		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Krasta Ozoli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (9)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

July		August		September	October	November	December
1	04:30 22:09	05:16 21:28	06:47 (B1) 15 07:02 (B1)	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	04:31 22:09	05:17 21:26	06:46 (B1) 18 07:04 (B1)	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	04:32 22:08	05:19 21:24	06:44 (B1) 22 07:06 (B1)	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	04:33 22:07	05:21 21:22	06:43 (B1) 24 07:07 (B1)	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	04:34 22:07	05:23 21:19	06:41 (B1) 27 07:08 (B1)	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:41 (B1) 28 07:09 (B1)	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:40 (B1) 29 07:09 (B1)	06:29 19:58	07:29 18:38	07:36 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:39 (B1) 31 07:10 (B1)	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:39 (B1) 32 07:11 (B1)	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	04:39 22:02	05:33 21:08	06:38 (B1) 32 07:10 (B1)	06:35 19:50	07:36 18:30	07:42 16:17	8 12:32 (B22) 10 12:34 (B22)
11	04:41 22:01	05:35 21:06	06:37 (B1) 34 07:11 (B1)	06:37 19:47	07:38 18:27	07:44 16:15	10 12:33 (B22) 12 12:35 (B22)
12	04:42 22:00	05:37 21:04	06:37 (B1) 34 07:11 (B1)	06:39 19:45	07:40 18:25	07:46 16:13	12 12:33 (B22) 14 12:37 (B22)
13	04:43 21:59	05:39 21:01	06:37 (B1) 34 07:11 (B1)	06:41 19:42	07:42 18:22	07:49 16:11	14 12:37 (B22) 15 12:38 (B22)
14	04:45 21:58	05:41 20:59	06:37 (B1) 34 07:11 (B1)	06:43 19:39	07:44 18:19	07:51 16:09	15 12:38 (B22) 17 12:39 (B22)
15	04:46 21:57	05:43 20:57	06:37 (B1) 34 07:11 (B1)	06:45 19:37	07:46 18:17	07:53 16:07	17 12:39 (B22) 17 12:39 (B22)
16	04:48 21:55	05:45 20:54	06:37 (B1) 34 07:11 (B1)	06:47 19:34	07:48 18:14	07:55 16:06	17 12:40 (B22) 17 12:40 (B22)
17	04:49 21:54	05:47 20:52	06:36 (B1) 34 07:10 (B1)	06:49 19:31	07:50 18:12	07:57 16:04	17 12:41 (B22) 18 12:41 (B22)
18	04:51 21:52	05:49 20:50	06:36 (B1) 33 07:09 (B1)	06:51 19:29	07:52 18:09	07:59 16:02	18 12:42 (B22) 19 12:42 (B22)
19	04:52 21:51	05:51 20:47	06:37 (B1) 32 07:09 (B1)	06:53 19:26	07:55 18:07	08:01 16:01	19 12:43 (B22) 19 12:43 (B22)
20	04:54 21:49	05:53 20:45	06:37 (B1) 31 07:08 (B1)	06:55 19:23	07:57 18:04	08:03 15:59	20 12:44 (B22) 19 12:43 (B22)
21	04:56 21:48	05:55 20:42	06:38 (B1) 29 07:07 (B1)	06:57 19:20	07:59 18:02	08:05 15:58	21 12:44 (B22) 20 12:44 (B22)
22	04:57 21:46	05:57 20:40	06:38 (B1) 28 07:06 (B1)	06:59 19:18	08:01 17:59	08:07 15:56	22 12:45 (B22) 20 12:44 (B22)
23	04:59 21:45	05:59 20:37	06:39 (B1) 26 07:05 (B1)	07:01 19:15	08:03 17:57	08:09 15:55	23 12:46 (B22) 20 12:45 (B22)
24	05:01 21:43	06:01 20:35	06:41 (B1) 22 07:03 (B1)	07:03 19:12	08:05 17:55	08:11 15:53	24 12:46 (B22) 19 12:45 (B22)
25	05:03 21:41	06:03 20:32	06:42 (B1) 19 07:01 (B1)	07:05 19:10	08:13 16:52	08:19 15:52	25 12:47 (B22) 19 12:45 (B22)
26	05:04 21:39	06:05 20:29	06:44 (B1) 14 06:58 (B1)	07:07 19:07	08:15 16:50	08:21 15:51	26 12:48 (B22) 18 12:45 (B22)
27	05:06 21:38	06:07 20:27		07:09 19:04	08:17 16:47	08:27 15:49	27 12:49 (B22) 18 12:45 (B22)
28	05:08 21:36	06:09 20:24		07:11 19:02	08:19 16:45	08:29 15:48	28 12:50 (B22) 17 12:45 (B22)
29	05:10 21:34	06:11 20:22		07:13 18:59	08:21 16:43	08:31 15:47	29 12:51 (B22) 17 12:46 (B22)
30	05:12 21:32	06:13 20:19		07:15 18:56	08:23 16:40	08:33 15:46	30 12:52 (B22) 16 12:46 (B22)
31	05:14 21:30	06:15 20:17	06:51 (B1) 9 07:00 (B1)		07:20 16:38	08:35 15:47	31 12:53 (B22) 14 12:46 (B22)
Potential sun hours	529	469		385	324	247	216
Total, worst case	9	730					383
Sun reduction	0.49	0.50					0.07
Oper. time red.	0.98	0.98					0.98
Wind dir. red.	0.65	0.65					0.64
Total reduction	0.31	0.32					0.04
Total, real	3	232					17

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Krastini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (116)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		14:03 (B22)	08:15		14:05 (B22)	07:11		06:49				05:32		04:36			
	15:48	27	14:30 (B22)	16:45	44	14:49 (B22)	17:47		19:53				20:55		21:52			
2	08:50		14:04 (B22)	08:13		14:06 (B22)	07:08		06:46				05:30		04:35			
	15:49	27	14:31 (B22)	16:47	43	14:49 (B22)	17:50		19:55				20:57		21:54			
3	08:50		14:03 (B22)	08:11		14:06 (B22)	07:06		06:43				05:28		04:34			
	15:51	29	14:32 (B22)	16:50	42	14:48 (B22)	17:52		19:57				20:59		21:55			
4	08:50		14:03 (B22)	08:09		14:07 (B22)	07:03		06:41				05:26		04:33			
	15:52	30	14:33 (B22)	16:52	41	14:48 (B22)	17:54		19:59				21:02		21:57			
5	08:49		14:04 (B22)	08:07		14:09 (B22)	07:00		06:38				05:23		04:32			
	15:53	30	14:34 (B22)	16:54	39	14:48 (B22)	17:56		20:01				21:04		21:58			
6	08:49		14:03 (B22)	08:05		14:09 (B22)	06:58		06:35				05:21		04:31			
	15:55	32	14:35 (B22)	16:56	38	14:47 (B22)	17:58		20:03				21:06		21:59			
7	08:48		14:03 (B22)	08:03		14:10 (B22)	06:55		06:33				05:19		04:30			
	15:56	33	14:36 (B22)	16:59	36	14:46 (B22)	18:00		20:05				21:08		22:00			
8	08:47		14:03 (B22)	08:00		14:12 (B22)	06:53		06:30				05:17		04:29			
	15:58	34	14:37 (B22)	17:01	33	14:45 (B22)	18:03		20:07				21:10		22:01			
9	08:47		14:03 (B22)	07:58		14:13 (B22)	06:50		06:27				05:15		04:28			
	15:59	35	14:38 (B22)	17:03	30	14:43 (B22)	18:05		20:10				21:12		22:02			
10	08:46		14:03 (B22)	07:56		14:15 (B22)	06:47		06:25				05:13		04:28			
	16:01	36	14:39 (B22)	17:05	27	14:42 (B22)	18:07		20:12				21:14		22:03			
11	08:45		14:03 (B22)	07:54		14:17 (B22)	06:45		06:22				05:10		04:27			
	16:03	37	14:40 (B22)	17:08	24	14:41 (B22)	18:09		20:14				21:16		22:04			
12	08:44		14:02 (B22)	07:52		14:20 (B22)	06:42		06:20				05:08		04:27			
	16:04	38	14:40 (B22)	17:10	17	14:37 (B22)	18:11		20:16				21:18		22:05			
13	08:43		14:02 (B22)	07:49		14:26 (B22)	06:39		06:17			06:43 (B4)	05:06		04:26			
	16:06	39	14:41 (B22)	17:12	6	14:32 (B22)	18:13		20:18		8	06:51 (B4)	21:20		22:06			
14	08:42		14:02 (B22)	07:47			06:37		06:14			06:40 (B4)	05:04		04:26			
	16:08	40	14:42 (B22)	17:14			18:15		20:20		12	06:52 (B4)	21:22		22:07			
15	08:41		14:02 (B22)	07:45			06:34		06:12			06:38 (B4)	05:02		04:26			
	16:10	40	14:42 (B22)	17:17			18:17		20:22		16	06:54 (B4)	21:24		22:07			
16	08:40		14:02 (B22)	07:43			06:31		06:09			06:35 (B4)	05:01		04:25			
	16:12	42	14:44 (B22)	17:19			18:20		20:24		20	06:55 (B4)	21:25		22:08			
17	08:39		14:02 (B22)	07:40			06:29		06:07			06:35 (B4)	04:59		04:25			
	16:14	42	14:44 (B22)	17:21			18:22		20:26		21	06:56 (B4)	21:27		22:08			
18	08:37		14:02 (B22)	07:38			06:26		06:04			06:33 (B4)	04:57		04:25			
	16:16	43	14:45 (B22)	17:23			18:24		20:28		23	06:56 (B4)	21:29		22:09			
19	08:36		14:02 (B22)	07:35			06:23		06:02			06:33 (B4)	04:55		04:25			
	16:18	43	14:45 (B22)	17:25			18:26		20:30		23	06:56 (B4)	21:31		22:09			
20	08:35		14:02 (B22)	07:33			06:21		05:59			06:32 (B4)	04:53		04:25			
	16:20	45	14:47 (B22)	17:28			18:28		20:32		23	06:55 (B4)	21:33		22:10			
21	08:33		14:02 (B22)	07:31			06:18		05:57			06:32 (B4)	04:52		04:25			
	16:22	45	14:47 (B22)	17:30			18:30		20:35		24	06:56 (B4)	21:35		22:10			
22	08:32		14:02 (B22)	07:28			06:15		05:54			06:33 (B4)	04:50		04:25			
	16:24	45	14:47 (B22)	17:32			18:32		20:37		23	06:56 (B4)	21:36		22:10			
23	08:30		14:02 (B22)	07:26			06:13		05:52			06:32 (B4)	04:48		04:26			
	16:26	45	14:47 (B22)	17:34			18:34		20:39		23	06:55 (B4)	21:38		22:10			
24	08:29		14:02 (B22)	07:23			06:10		05:49			06:33 (B4)	04:47		04:26			
	16:28	46	14:48 (B22)	17:37			18:36		20:41		21	06:54 (B4)	21:40		22:10			
25	08:27		14:03 (B22)	07:21			06:07		05:47			06:33 (B4)	04:45		04:26			
	16:30	46	14:49 (B22)	17:39			18:38		20:43		21	06:54 (B4)	21:42		22:10			
26	08:25		14:03 (B22)	07:18			06:05		05:44			06:33 (B4)	04:44		04:27			
	16:32	46	14:49 (B22)	17:41			18:40		20:45		19	06:52 (B4)	21:43		22:10			
27	08:24		14:03 (B22)	07:16			06:02		05:42			06:35 (B4)	04:42		04:27			
	16:34	46	14:49 (B22)	17:43			18:43		20:47		16	06:51 (B4)	21:45		22:10			
28	08:22		14:04 (B22)	07:13			05:59		05:40			06:36 (B4)	04:41		04:28			
	16:36	45	14:49 (B22)	17:45			18:45		20:49		13	06:49 (B4)	21:47		22:10			
29	08:20		14:04 (B22)				06:57		05:37			06:39 (B4)	04:39		04:28			
	16:39	46	14:50 (B22)				19:47		20:51		7	06:46 (B4)	21:48		22:10			
30	08:18		14:05 (B22)				06:54		05:35				04:38		04:29			
	16:41	45	14:50 (B22)				19:49		20:53				21:50		22:09			
31	08:17		14:04 (B22)				06:51						04:37					
	16:43	45	14:49 (B22)				19:51						21:51					
Potential sun hours	235			266			366		426				508		529			
Total, worst case	1222			420					313									
Sun reduction	0.13			0.20					0.50									
Oper. time red.	0.98			0.98					0.98									
Wind dir. red.	0.66			0.66					0.65									
Total reduction	0.09			0.13					0.32									
Total, real	106			55					101									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Krastini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (116)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	13:44 (B22) 14:12 (B22)	08:24 15:45	13:45 (B22) 14:22 (B22)
2	04:31 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	13:42 (B22) 14:13 (B22)	08:26 15:44	13:46 (B22) 14:22 (B22)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	13:41 (B22) 14:15 (B22)	08:27 15:43	13:46 (B22) 14:21 (B22)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	13:40 (B22) 14:16 (B22)	08:29 15:42	13:47 (B22) 14:21 (B22)
5	04:34 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	13:38 (B22) 14:16 (B22)	08:31 15:42	13:48 (B22) 14:21 (B22)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	13:38 (B22) 14:18 (B22)	08:32 15:41	13:49 (B22) 14:21 (B22)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23	13:37 (B22) 14:18 (B22)	08:34 15:40	13:50 (B22) 14:20 (B22)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	13:37 (B22) 14:19 (B22)	08:35 15:40	13:51 (B22) 14:21 (B22)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	13:36 (B22) 14:19 (B22)	08:37 15:39	13:51 (B22) 14:20 (B22)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	13:36 (B22) 14:19 (B22)	08:38 15:39	13:53 (B22) 14:21 (B22)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	13:36 (B22) 14:21 (B22)	08:39 15:38	13:54 (B22) 14:20 (B22)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	13:35 (B22) 14:20 (B22)	08:40 15:38	13:55 (B22) 14:21 (B22)
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	13:36 (B22) 14:21 (B22)	08:41 15:38	13:56 (B22) 14:20 (B22)
14	04:45 21:58	05:41 20:59	06:46 (B4) 19:39	06:43 18:19	07:51 16:09	13:36 (B22) 14:21 (B22)	08:43 15:38	13:57 (B22) 14:20 (B22)
15	04:46 21:57	05:43 20:57	06:44 (B4) 19:37	06:45 18:17	07:53 16:08	13:35 (B22) 14:21 (B22)	08:44 15:38	13:57 (B22) 14:20 (B22)
16	04:48 21:55	05:45 20:54	06:42 (B4) 19:34	06:47 18:14	07:55 16:06	13:36 (B22) 14:22 (B22)	08:45 15:38	13:58 (B22) 14:20 (B22)
17	04:49 21:54	05:47 20:52	06:40 (B4) 19:31	06:49 18:12	07:57 16:04	13:36 (B22) 14:22 (B22)	08:45 15:38	13:59 (B22) 14:21 (B22)
18	04:51 21:52	05:49 20:49	06:58 (B4) 19:29	06:51 18:09	07:59 16:02	13:36 (B22) 14:22 (B22)	08:46 15:38	14:00 (B22) 14:21 (B22)
19	04:52 21:51	05:51 20:47	06:59 (B4) 19:26	07:54 18:07	16:02	13:37 (B22) 14:22 (B22)	08:47 15:38	14:00 (B22) 14:20 (B22)
20	04:54 21:49	05:53 20:45	06:38 (B4) 19:23	06:55 18:04	08:01	13:37 (B22) 14:22 (B22)	08:48 15:39	14:01 (B22) 14:21 (B22)
21	04:56 21:48	05:55 20:42	07:00 (B4) 19:20	06:57 18:02	15:59	13:37 (B22) 14:22 (B22)	08:48 15:39	14:02 (B22) 14:22 (B22)
22	04:57 21:46	05:57 20:40	06:37 (B4) 19:18	06:59 17:59	08:05	13:39 (B22) 14:23 (B22)	08:49 15:39	14:02 (B22) 14:22 (B22)
23	04:59 21:45	05:59 20:37	06:37 (B4) 19:15	07:01 17:57	08:07	13:39 (B22) 14:22 (B22)	08:49 15:40	14:03 (B22) 14:23 (B22)
24	05:01 21:43	06:01 20:35	07:00 (B4) 19:12	07:03 17:55	08:09	13:39 (B22) 14:22 (B22)	08:50 15:40	14:03 (B22) 14:23 (B22)
25	05:03 21:41	06:03 20:32	06:37 (B4) 19:10	07:05 16:52	15:53	13:40 (B22) 14:22 (B22)	08:50 15:41	14:03 (B22) 14:24 (B22)
26	05:04 21:39	06:05 20:29	06:37 (B4) 19:07	07:07 16:50	15:52	13:40 (B22) 14:22 (B22)	08:51 15:42	14:03 (B22) 14:24 (B22)
27	05:06 21:37	06:07 20:27	06:57 (B4) 19:04	07:09 16:47	15:51	13:42 (B22) 14:22 (B22)	08:51 15:43	14:03 (B22) 14:25 (B22)
28	05:08 21:36	06:09 20:24	06:37 (B4) 19:02	07:11 16:45	08:17	13:42 (B22) 14:22 (B22)	08:51 15:44	14:03 (B22) 14:26 (B22)
29	05:10 21:34	06:11 20:22	06:41 (B4) 18:59	07:13 16:43	08:19	13:43 (B22) 14:22 (B22)	08:51 15:45	14:03 (B22) 14:27 (B22)
30	05:12 21:32	06:13 20:19	06:53 (B4) 18:56	16:43	10	13:44 (B22) 14:07 (B22)	08:51 15:46	14:04 (B22) 14:28 (B22)
31	05:14 21:30	06:15 20:17		07:15 16:38	18	13:46 (B22) 14:10 (B22)	08:51 15:47	14:04 (B22) 14:29 (B22)
Potential sun hours	529	469	385	324	247		216	
Total, worst case				52	1246		791	
Sun reduction		308		0.26	0.08		0.07	
Oper. time red.		0.50		0.98	0.98		0.98	
Wind dir. red.		0.98		0.66	0.66		0.66	
Total reduction		0.65		0.17	0.05		0.05	
Total, real		0.32		9	67		36	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kropini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (172)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:57	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:37 22:03	05:31 21:11	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:07	06:24 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:04	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:12 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:46	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kvieši - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (101)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:17 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:26 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:43 17:19	06:31 18:19	06:09 20:24	05:00 21:26	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:07 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:38 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:50 21:53	05:49 20:50	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:40
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:11	04:56 21:43	05:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:42	04:26 22:11	05:02 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:44
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:17		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Klavas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (81)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		09:30 (B12)	08:15		09:00 (B11)	07:11			06:49		07:36 (B18)	05:32			04:36		05:22 (B15)
	15:48	13	09:43 (B12)	16:45	28	09:28 (B11)	17:47			19:53	54	19:07 (B22)	20:55			21:52	21	05:43 (B15)
2	08:50		09:29 (B12)	08:13		08:59 (B11)	07:08			06:46		07:11 (B23)	05:30			04:35		05:21 (B15)
	15:49	14	09:43 (B12)	16:47	30	09:29 (B11)	17:50			19:55	61	19:05 (B22)	20:57			21:54	23	05:44 (B15)
3	08:50		09:29 (B12)	08:11		08:59 (B11)	07:05			06:43		07:08 (B23)	05:28			04:34		05:20 (B15)
	15:51	16	09:45 (B12)	16:50	31	09:30 (B11)	17:52			19:57	61	19:01 (B22)	20:59			21:55	25	05:45 (B15)
4	08:50		09:28 (B12)	08:09		08:59 (B11)	07:03			06:41		07:06 (B23)	05:26			04:33		05:20 (B15)
	15:52	17	09:45 (B12)	16:52	31	09:30 (B11)	17:54			19:59	60	08:16 (B18)	21:01			21:56	26	05:46 (B15)
5	08:49		09:28 (B12)	08:07		08:58 (B11)	07:00			06:38		07:03 (B23)	05:23			04:32		05:20 (B15)
	15:53	18	09:46 (B12)	16:54	32	09:30 (B11)	17:56			20:01	63	08:15 (B18)	21:03			21:58	27	05:47 (B15)
6	08:49		09:29 (B12)	08:05		08:59 (B11)	06:58			06:35		07:03 (B23)	05:21			04:31		05:19 (B15)
	15:55	19	09:48 (B12)	16:56	32	09:31 (B11)	17:58			20:03	65	08:16 (B18)	21:05			21:59	28	05:47 (B15)
7	08:48		09:28 (B12)	08:02		08:59 (B11)	06:55			06:33		07:02 (B23)	05:19			04:30		05:19 (B15)
	15:56	20	09:48 (B12)	16:58	32	09:31 (B11)	18:00			20:05	66	08:15 (B18)	21:08			22:00	29	05:48 (B15)
8	08:47		09:28 (B12)	08:00		09:00 (B11)	06:53			06:30		07:01 (B23)	05:17			04:29		05:19 (B15)
	15:58	21	09:49 (B12)	17:01	31	09:31 (B11)	18:02			20:07	67	08:14 (B18)	21:10			22:01	30	05:49 (B15)
9	08:47		09:29 (B12)	07:58		08:59 (B11)	06:50			06:27		07:01 (B23)	05:15			04:28		05:19 (B15)
	15:59	21	09:50 (B12)	17:03	32	09:31 (B11)	18:05			20:09	67	08:15 (B18)	21:12			22:02	30	05:49 (B15)
10	08:46		09:29 (B12)	07:56		09:00 (B11)	06:47			06:25		07:00 (B23)	05:12			04:28		05:19 (B15)
	16:01	22	09:51 (B12)	17:05	31	09:31 (B11)	18:07			20:12	67	08:14 (B18)	21:14			22:03	31	05:50 (B15)
11	08:45		09:29 (B12)	07:54		09:00 (B11)	06:45			06:22		07:01 (B23)	05:10			04:27		05:18 (B15)
	16:03	22	09:51 (B12)	17:07	30	09:30 (B11)	18:09			20:14	65	08:14 (B18)	21:16			22:04	32	05:50 (B15)
12	08:44		09:28 (B12)	07:52		09:01 (B11)	06:42			06:20		07:01 (B23)	05:08			04:27		05:19 (B15)
	16:04	23	09:51 (B12)	17:10	28	09:29 (B11)	18:11			20:16	63	08:12 (B18)	21:18			22:05	31	05:50 (B15)
13	08:43		09:29 (B12)	07:49		09:02 (B11)	06:39			06:17		07:02 (B23)	05:06			04:26		05:19 (B15)
	16:06	23	09:52 (B12)	17:12	27	09:29 (B11)	18:13			20:18	60	08:12 (B18)	21:19			22:06	32	05:51 (B15)
14	08:42		09:29 (B12)	07:47		09:02 (B11)	06:37			06:14		07:02 (B23)	05:04			04:26		05:18 (B15)
	16:08	24	09:53 (B12)	17:14	26	09:28 (B11)	18:15			20:20	58	08:11 (B18)	21:21			22:06	33	05:51 (B15)
15	08:41		09:29 (B12)	07:45		09:04 (B11)	06:34			06:12		07:04 (B23)	05:02			04:26		05:19 (B15)
	16:10	24	09:53 (B12)	17:16	23	09:27 (B11)	18:17			20:22	52	08:10 (B18)	21:23			22:07	32	05:51 (B15)
16	08:40		09:30 (B12)	07:42		09:05 (B11)	06:31			06:09		07:05 (B23)	05:00			04:25		05:19 (B15)
	16:12	24	09:54 (B12)	17:19	20	09:25 (B11)	18:19			20:24	46	08:08 (B18)	21:25			22:08	33	05:52 (B15)
17	08:39		09:30 (B12)	07:40		09:07 (B11)	06:29			06:07		07:33 (B18)	04:59			04:25		05:19 (B15)
	16:14	24	09:54 (B12)	17:21	16	09:23 (B11)	18:22			20:26	34	08:07 (B18)	21:27			22:08	33	05:52 (B15)
18	08:37		09:31 (B12)	07:38		09:10 (B11)	06:26			06:04		07:33 (B18)	04:57			04:25		05:19 (B15)
	16:16	23	09:54 (B12)	17:23	9	09:19 (B11)	18:24			20:28	32	08:05 (B18)	21:29			22:09	33	05:52 (B15)
19	08:36		09:31 (B12)	07:35			06:23			06:02		07:35 (B18)	04:55			04:25		05:19 (B15)
	16:18	23	09:54 (B12)	17:25			18:26			20:30	29	08:04 (B18)	21:31			22:09	33	05:52 (B15)
20	08:35		09:31 (B12)	07:33			06:21			05:59		07:36 (B18)	04:53			04:25		05:19 (B15)
	16:20	23	09:54 (B12)	17:28			18:28			20:32	25	08:01 (B18)	21:33			22:10	34	05:53 (B15)
21	08:33		09:32 (B12)	07:31			06:18		18:01 (B22)	05:57		07:38 (B18)	04:52			04:25		05:19 (B15)
	16:22	23	09:55 (B12)	17:30			18:30	1	18:02 (B22)	20:34	21	07:59 (B18)	21:35			22:10	34	05:53 (B15)
22	08:32		09:33 (B12)	07:28			06:15		17:56 (B22)	05:54		07:41 (B18)	04:50			04:25		05:20 (B15)
	16:24	21	09:54 (B12)	17:32			18:32	7	18:03 (B22)	20:37	15	07:56 (B18)	21:36			22:10	34	05:54 (B15)
23	08:30		09:33 (B12)	07:26			06:13		17:54 (B22)	05:52		07:47 (B18)	04:48			04:26		05:20 (B15)
	16:26	21	09:54 (B12)	17:34			18:34	12	18:06 (B22)	20:39	2	07:49 (B18)	21:38			22:10	33	05:53 (B15)
24	08:29		09:34 (B12)	07:23			06:10		17:53 (B22)	05:49			04:47			04:26		05:20 (B15)
	16:28	20	09:54 (B12)	17:36			18:36	15	18:08 (B22)	20:41			21:40			22:10	33	05:53 (B15)
25	08:27		09:07 (B11)	07:21			06:07		06:52 (B18)	05:47			04:45			04:26		05:21 (B15)
	16:30	28	09:53 (B12)	17:39			18:38	29	18:10 (B22)	20:43			21:41			22:10	33	05:54 (B15)
26	08:25		09:06 (B11)	07:18			06:05		06:48 (B18)	05:44			04:44			04:27		05:21 (B15)
	16:32	31	09:53 (B12)	17:41			18:40	39	18:11 (B22)	20:45			21:43			22:10	33	05:54 (B15)
27	08:24		09:04 (B11)	07:16			06:02		06:44 (B18)	05:42			04:42		05:30 (B15)	04:27		05:22 (B15)
	16:34	32	09:52 (B12)	17:43			18:42	46	18:11 (B22)	20:47			21:45	3	05:33 (B15)	22:10	32	05:54 (B15)
28	08:22		09:03 (B11)	07:13			05:59		06:42 (B18)	05:39			04:41		05:26 (B15)	04:28		05:21 (B15)
	16:36	30	09:50 (B12)	17:45			18:45	49	18:10 (B22)	20:49			21:46	11	05:37 (B15)	22:10	33	05:54 (B15)
29	08:20		09:02 (B11)				06:57		07:40 (B18)	05:37			04:39		05:25 (B15)	04:28		05:22 (B15)
	16:38	24	09:26 (B11)				19:47	52	19:10 (B22)	20:51			21:48	15	05:40 (B15)	22:10	32	05:54 (B15)
30	08:18		09:01 (B11)				06:54		07:38 (B18)	05:35			04:38		05:24 (B15)	04:29		05:23 (B15)
	16:41	25	09:26 (B11)				19:49	54	19:09 (B22)	20:53			21:49	17	05:41 (B15)	22:09	32	05:55 (B15)
31	08:16		09:00 (B11)				06:51		07:36 (B18)				04:37		05:23 (B15)			
	16:43	27	09:27 (B11)				19:51	55	19:08 (B22)				21:51	19	05:42 (B15)			
Potential sun hours		235		266			366			426			508			529		
Total, worst case		696		489			359		1133			65			925			
Sun reduction		0.13		0.20			0.41		0.50			0.57			0.56			
Oper. time red.		0.98		0.98			0.98		0.98			0.98			0.98			
Wind dir. red.		0.60		0.59			0.65		0.65			0.67			0.67			
Total reduction		0.08		0.11			0.26		0.31			0.36			0.36			
Total, real		53		55			92		353			24			332			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Klavas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (81)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July		August		September		October		November		December		
1	04:30		05:22 (B15)	05:16		06:17	07:00 (B23)	07:17		07:22	08:29 (B11)	08:24	
	22:09	32	05:54 (B15)	21:28		20:14	65 08:13 (B18)	18:53		16:36	31 09:00 (B11)	15:45	
2	04:31		05:23 (B15)	05:17		06:19	06:59 (B23)	07:19		07:25	08:29 (B11)	08:26	
	22:08	31	05:54 (B15)	21:26		20:11	67 08:13 (B18)	18:51		16:34	31 09:00 (B11)	15:44	
3	04:32		05:24 (B15)	05:19		06:21	06:59 (B23)	07:21		07:27	08:28 (B11)	08:27	
	22:08	30	05:54 (B15)	21:24		20:09	67 08:13 (B18)	18:48		16:31	32 09:00 (B11)	15:43	
4	04:32		05:24 (B15)	05:21		06:23	06:58 (B23)	07:23		07:29	08:29 (B11)	08:29	
	22:07	30	05:54 (B15)	21:21		20:06	68 08:12 (B18)	18:45		16:29	32 09:01 (B11)	15:42	
5	04:33		05:25 (B15)	05:23		06:25	06:58 (B23)	07:25		07:31	08:28 (B11)	08:31	
	22:06	29	05:54 (B15)	21:19		20:03	66 08:11 (B18)	18:43		16:27	32 09:00 (B11)	15:41	
6	04:35		05:26 (B15)	05:25		06:27	06:58 (B23)	07:27		07:33	08:29 (B11)	08:32	
	22:06	28	05:54 (B15)	21:17		20:01	66 08:11 (B18)	18:40		16:25	32 09:01 (B11)	15:41	
7	04:36		05:26 (B15)	05:27		06:29	06:58 (B23)	07:29		07:35	08:29 (B11)	08:34	
	22:05	28	05:54 (B15)	21:15		19:58	64 08:10 (B18)	18:38		16:23	31 09:00 (B11)	15:40	
8	04:37		05:27 (B15)	05:29		06:31	07:00 (B23)	07:31		07:38	08:29 (B11)	08:35	
	22:04	26	05:53 (B15)	21:13		19:55	60 08:10 (B18)	18:35		16:21	30 08:59 (B11)	15:40	
9	04:38		05:27 (B15)	05:31		06:33	07:02 (B23)	07:33		07:40	08:30 (B11)	08:36	
	22:03	26	05:53 (B15)	21:11		19:53	59 18:54 (B22)	18:32		16:19	30 09:00 (B11)	15:39	
10	04:39		05:28 (B15)	05:33		06:35	07:04 (B23)	07:36		07:42	08:31 (B11)	08:38	
	22:02	24	05:52 (B15)	21:08		19:50	61 18:58 (B22)	18:30		16:17	28 08:59 (B11)	15:39	
11	04:41		05:29 (B15)	05:35		06:37	07:28 (B18)	07:38		07:44	08:32 (B11)	08:39	
	22:01	22	05:51 (B15)	21:06		19:47	54 18:59 (B22)	18:27		16:15	27 08:59 (B11)	15:38	
12	04:42		05:30 (B15)	05:37		06:39	07:29 (B18)	07:40		07:46	08:32 (B11)	08:40	
	22:00	20	05:50 (B15)	21:04		19:45	55 19:00 (B22)	18:24		16:13	26 08:58 (B11)	15:38	
13	04:43		05:32 (B15)	05:39		06:41	07:29 (B18)	07:42		07:48	08:34 (B11)	08:41	
	21:59	18	05:50 (B15)	21:01		19:42	55 19:00 (B22)	18:22		16:11	24 08:58 (B11)	15:38	
14	04:45		05:33 (B15)	05:41		06:43	07:30 (B18)	07:44		07:51	08:35 (B11)	08:42	
	21:58	16	05:49 (B15)	20:59		19:39	54 19:01 (B22)	18:19		16:09	30 09:22 (B12)	15:38	
15	04:46		05:34 (B15)	05:43		06:45	07:32 (B18)	07:46		07:53	08:36 (B11)	08:43	
	21:56	13	05:47 (B15)	20:57		19:37	50 19:01 (B22)	18:17		16:07	33 09:24 (B12)	15:38	
16	04:48		05:37 (B15)	05:45		06:47	07:33 (B18)	07:48		07:55	08:39 (B11)	08:44	
	21:55	8	05:45 (B15)	20:54		19:34	47 19:00 (B22)	18:14		16:06	31 09:26 (B12)	15:38	
17	04:49			05:47		06:49	07:36 (B18)	07:50		07:57	08:41 (B11)	08:45	
	21:54			20:52		19:31	41 19:00 (B22)	18:12		16:04	28 09:27 (B12)	15:38	
18	04:51			05:49		06:51	07:38 (B18)	07:52		07:59	09:08 (B12)	08:46	
	21:52			20:49		19:28	33 18:58 (B22)	18:09		16:02	19 09:27 (B12)	15:38	
19	04:52			05:51		06:53	18:39 (B22)	07:54		08:01	09:08 (B12)	08:47	
	21:51			20:47		19:26	16 18:55 (B22)	18:07		16:01	21 09:29 (B12)	15:38	
20	04:54			05:53	07:50 (B18)	06:55	18:40 (B22)	07:56		08:03	09:08 (B12)	08:48	
	21:49			20:44	7 07:57 (B18)	19:23	12 18:52 (B22)	18:04		15:59	21 09:29 (B12)	15:38	
21	04:56			05:55	07:45 (B18)	06:57	18:41 (B22)	07:59		08:05	09:07 (B12)	08:48	
	21:48			20:42	17 08:02 (B18)	19:20	9 18:50 (B22)	18:02		15:57	23 09:30 (B12)	15:39	
22	04:57			05:57	07:42 (B18)	06:59	18:43 (B22)	08:01		08:07	09:07 (B12)	08:49	
	21:46			20:39	22 08:04 (B18)	19:18	4 18:47 (B22)	17:59		15:56	23 09:30 (B12)	15:39	
23	04:59			05:59	07:40 (B18)	07:01		08:03		08:09	09:08 (B12)	08:49	
	21:44			20:37	26 08:06 (B18)	19:15		17:57		15:55	23 09:31 (B12)	15:40	
24	05:01			06:01	07:38 (B18)	07:03		08:05	09:40 (B11)	08:11	09:08 (B12)	08:50	
	21:43			20:34	30 08:08 (B18)	19:12		17:54	10 09:50 (B11)	15:53	23 09:31 (B12)	15:40	
25	05:03			06:03	07:36 (B18)	07:05		07:07		08:36 (B11)	08:13	09:08 (B12)	08:50
	21:41			20:32	32 08:08 (B18)	19:10		16:52	17 08:53 (B11)	15:52	24 09:32 (B12)	15:41	
26	05:04			06:05	07:35 (B18)	07:07		07:09		08:35 (B11)	08:15	09:08 (B12)	08:50
	21:39			20:29	34 08:09 (B18)	19:07		16:50	20 08:55 (B11)	15:51	24 09:32 (B12)	15:42	
27	05:06			06:07	07:07 (B23)	07:09		07:12		08:33 (B11)	08:17	09:08 (B12)	08:51
	21:37			20:27	47 08:10 (B18)	19:04		16:47	23 08:56 (B11)	15:49	24 09:32 (B12)	15:43	
28	05:08			06:09	07:04 (B23)	07:11		07:14		08:31 (B11)	08:19	09:08 (B12)	08:51
	21:35			20:24	54 08:11 (B18)	19:01		16:45	26 08:57 (B11)	15:48	24 09:32 (B12)	15:44	
29	05:10			06:11	07:03 (B23)	07:13		07:16		08:31 (B11)	08:20	09:10 (B12)	08:51
	21:34			20:22	58 08:12 (B18)	18:59		16:43	28 08:59 (B11)	15:47	23 09:33 (B12)	15:44	
30	05:12			06:13	07:01 (B23)	07:15		07:18		08:30 (B11)	08:22	09:10 (B12)	08:51
	21:32			20:19	61 08:12 (B18)	18:56		16:40	29 08:59 (B11)	15:46	23 09:33 (B12)	15:45	
31	05:14			06:15	07:00 (B23)			07:20		08:29 (B11)		08:51	
	21:30			20:16	64 08:12 (B18)			16:38	30 08:59 (B11)			15:47	
Potential sun hours	529			469		385		324		247		216	
Total, worst case	381			452		1073		183		803		343	
Sun reduction	0.49			0.50		0.43		0.26		0.08		0.07	
Oper. time red.	0.98			0.98		0.98		0.98		0.98		0.98	
Wind dir. red.	0.67			0.65		0.65		0.59		0.60		0.60	
Total reduction	0.32			0.31		0.27		0.15		0.05		0.04	
Total, real	121			140		286		27		38		14	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Klavini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (149)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:58	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:34 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:10	04:29 22:04	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:21	04:26 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:32 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:29	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:35 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kukas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (217)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:49 19:53	05:32 20:55	04:36 21:52	04:30 22:09	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:05	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:13 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:20 20:16	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:26 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:57 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:18 15:48	08:50 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Laides - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (135)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		09:50 (B14)	08:15		08:56 (B24)	07:11		06:49				05:33		04:36			
	15:48	16	10:06 (B14)	16:45	64	10:28 (B14)	17:48		19:53				20:55		21:53			
2	08:50		09:50 (B14)	08:13		08:56 (B24)	07:08		06:46				05:30		04:35			
	15:49	18	10:08 (B14)	16:48	63	10:28 (B14)	17:50		19:55				20:57		21:54			
3	08:50		09:49 (B14)	08:11		08:57 (B24)	07:06		06:43				05:28		04:34			
	15:51	20	10:09 (B14)	16:50	61	10:28 (B14)	17:52		19:57				21:00		21:55			
4	08:50		09:49 (B14)	08:09		08:57 (B24)	07:03		06:41		07:13 (B22)		05:26		04:33			
	15:52	21	10:10 (B14)	16:52	61	10:28 (B14)	17:54		19:59	12	07:25 (B22)		21:02		21:57			
5	08:49		09:49 (B14)	08:07		08:58 (B24)	07:01		06:38		07:09 (B22)		05:23		04:32			
	15:53	23	10:12 (B14)	16:54	57	10:27 (B14)	17:56		20:01	19	07:28 (B22)		21:04		21:58			
6	08:49		09:49 (B14)	08:05		08:58 (B24)	06:58		06:35		07:08 (B22)		05:21		04:31			
	15:55	24	10:13 (B14)	16:56	55	10:26 (B14)	17:58		20:03	22	07:30 (B22)		21:06		21:59			
7	08:48		09:48 (B14)	08:03		08:59 (B24)	06:55		06:33		07:05 (B22)		05:19		04:30			
	15:56	26	10:14 (B14)	16:59	52	10:25 (B14)	18:01		20:05	26	07:31 (B22)		21:08		22:00			
8	08:48		09:48 (B14)	08:01		09:01 (B24)	06:53		06:30		07:04 (B22)		05:17		04:29			
	15:58	27	10:15 (B14)	17:01	46	10:24 (B14)	18:03		20:08	28	07:32 (B22)		21:10		22:01			
9	08:47		09:48 (B14)	07:58		09:02 (B24)	06:50		06:28		07:03 (B22)		05:15		04:29			
	16:00	28	10:16 (B14)	17:03	40	10:22 (B14)	18:05		20:10	29	07:32 (B22)		21:12		22:02			
10	08:46		09:47 (B14)	07:56		09:05 (B24)	06:47		06:25		07:01 (B22)		05:13		04:28			
	16:01	30	10:17 (B14)	17:05	31	10:20 (B14)	18:07		20:12	31	07:32 (B22)		21:14		22:03			
11	08:45		09:47 (B14)	07:54		10:01 (B14)	06:45		06:22		07:01 (B22)		05:11		04:27			
	16:03	31	10:18 (B14)	17:08	17	10:18 (B14)	18:09		20:14	32	07:33 (B22)		21:16		22:04			
12	08:44		09:46 (B14)	07:52		10:04 (B14)	06:42		06:20		07:00 (B22)		05:09		04:27			
	16:05	33	10:19 (B14)	17:10	9	10:13 (B14)	18:11		20:16	33	07:33 (B22)		21:18		22:05			
13	08:43		09:46 (B14)	07:50			06:40		06:17		07:00 (B22)		05:07		04:26			
	16:06	34	10:20 (B14)	17:12			18:13		20:18	34	07:34 (B22)		21:20		22:06			
14	08:42		09:47 (B14)	07:47			06:37		06:15		06:59 (B22)		05:05		04:26			
	16:08	34	10:21 (B14)	17:14			18:15		20:20	34	07:33 (B22)		21:22		22:07			
15	08:41		09:46 (B14)	07:45			06:34		06:12		06:59 (B22)		05:03		04:26			
	16:10	35	10:21 (B14)	17:17			18:18		20:22	34	07:33 (B22)		21:24		22:07			
16	08:40		09:46 (B14)	07:43			06:32		06:09		06:58 (B22)		05:01		04:26			
	16:12	37	10:23 (B14)	17:19			18:20		20:24	34	07:32 (B22)		21:25		22:08			
17	08:39		09:46 (B14)	07:40			06:29		06:07		06:59 (B22)		04:59		04:25			
	16:14	37	10:23 (B14)	17:21			18:22		20:26	33	07:32 (B22)		21:27		22:08			
18	08:37		09:46 (B14)	07:38			06:26		06:04		06:58 (B22)		04:57		04:25			
	16:16	38	10:24 (B14)	17:23			18:24		20:28	33	07:31 (B22)		21:29		22:09			
19	08:36		09:46 (B14)	07:36			06:24		06:02		06:59 (B22)		04:55		04:25			
	16:18	38	10:24 (B14)	17:26			18:26		20:30	32	07:31 (B22)		21:31		22:09			
20	08:35		09:46 (B14)	07:33			06:21		05:59		06:59 (B22)		04:53		04:25			
	16:20	40	10:26 (B14)	17:28			18:28		20:33	30	07:29 (B22)		21:33		22:10			
21	08:33		09:46 (B14)	07:31			06:18		05:57		07:00 (B22)		04:52		04:25			
	16:22	40	10:26 (B14)	17:30			18:30		20:35	29	07:29 (B22)		21:35		22:10			
22	08:32		09:05 (B24)	07:28			06:16		05:54		07:01 (B22)		04:50		04:26			
	16:24	45	10:26 (B14)	17:32			18:32		20:37	27	07:28 (B22)		21:37		22:10			
23	08:30		09:03 (B24)	07:26			06:13		05:52		07:01 (B22)		04:48		04:26			
	16:26	50	10:27 (B14)	17:34			18:34		20:39	25	07:26 (B22)		21:38		22:10			
24	08:29		09:02 (B24)	07:23			06:10		05:49		07:03 (B22)		04:47		04:26			
	16:28	54	10:28 (B14)	17:37			18:36		20:41	21	07:24 (B22)		21:40		22:10			
25	08:27		09:00 (B24)	07:21			06:08		05:47		07:05 (B22)		04:45		04:26			
	16:30	57	10:28 (B14)	17:39			18:38		20:43	17	07:22 (B22)		21:42		22:10			
26	08:26		08:58 (B24)	07:18			06:05		05:44		07:06 (B22)		04:44		04:27			
	16:32	61	10:29 (B14)	17:41			18:41		20:45	13	07:19 (B22)		21:43		22:10			
27	08:24		08:57 (B24)	07:16			06:02		05:42				04:42		04:27			
	16:34	63	10:29 (B14)	17:43			18:43		20:47				21:45		22:10			
28	08:22		08:57 (B24)	07:13			05:59		05:40				04:41		04:28			
	16:37	64	10:29 (B14)	17:45			18:45		20:49				21:47		22:10			
29	08:20		08:57 (B24)				06:57		05:37				04:40		04:29			
	16:39	64	10:29 (B14)				19:47		20:51				21:48		22:10			
30	08:18		08:57 (B24)				06:54		05:35				04:38		04:29			
	16:41	64	10:29 (B14)				19:49		20:53				21:50		22:09			
31	08:17		08:57 (B24)				06:51						04:37					
	16:43	64	10:29 (B14)				19:51						21:51					
Potential sun hours	235			266			366		426				508		529			
Total, worst case	1216			556					628									
Sun reduction	0.13			0.20					0.50									
Oper. time red.	0.98			0.98					0.98									
Wind dir. red.	0.61			0.60					0.66									
Total reduction	0.08			0.12					0.31									
Total, real	94			64					197									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Laides - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (135)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:00 (B22) 18:54	07:17 16:36	08:34 (B24) 15:45
2	04:31 22:08	05:18 21:26	06:19 20:11	07:00 (B22) 18:51	07:19 16:34	08:31 (B24) 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:01 (B22) 18:48	07:21 16:32	08:30 (B24) 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:01 (B22) 18:46	07:23 16:29	08:29 (B24) 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:02 (B22) 18:43	07:25 16:27	08:28 (B24) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:03 (B22) 18:40	07:27 16:25	08:28 (B24) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:04 (B22) 18:38	07:30 16:23	08:27 (B24) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:07 (B22) 18:35	07:32 16:21	08:27 (B24) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:10 (B22) 18:32	07:34 16:19	08:27 (B24) 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:12 (B22) 18:30	07:36 16:17	08:27 (B24) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:14 (B22) 18:27	07:38 16:15	08:27 (B24) 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:16 (B22) 18:25	07:40 16:13	08:27 (B24) 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:18 (B22) 18:22	07:42 16:11	08:28 (B24) 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:20 (B22) 18:20	07:44 16:09	08:29 (B24) 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:22 (B22) 18:17	07:46 16:08	08:30 (B24) 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:24 (B22) 18:14	07:48 16:06	08:31 (B24) 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:26 (B22) 18:12	07:50 16:04	08:33 (B24) 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:28 (B22) 18:09	07:52 16:02	08:36 (B24) 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:30 (B22) 18:07	07:54 16:01	08:38 (B24) 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:32 (B22) 18:04	07:56 15:59	08:40 (B24) 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:34 (B22) 18:02	07:58 15:58	08:42 (B24) 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	07:36 (B22) 18:00	08:00 15:56	08:44 (B24) 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	07:38 (B22) 17:57	08:02 15:55	08:46 (B24) 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	07:40 (B22) 17:55	08:04 15:53	08:48 (B24) 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	07:42 (B22) 17:52	08:06 15:52	08:50 (B24) 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	07:44 (B22) 17:50	08:08 15:51	08:52 (B24) 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	07:46 (B22) 17:48	08:10 15:49	08:54 (B24) 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	07:48 (B22) 17:46	08:12 15:48	08:56 (B24) 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	07:50 (B22) 17:43	08:14 15:47	08:58 (B24) 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	07:52 (B22) 17:41	08:16 15:46	08:59 (B24) 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	07:54 (B22) 17:39	08:18 15:45	09:01 (B24) 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		437	200		1492	383
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.66	0.66		0.61	0.61
Total reduction		0.31	0.27		0.05	0.04
Total, real		137	54		71	16

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Landzani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (124)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

		January	February	March		April		May		June
1	08:51	08:15	07:11		07:38 (B14)	06:49		05:33	06:17 (B22)	04:36
	15:48	16:45	17:48	10	07:48 (B14)	19:53		20:55	15 06:32 (B22)	21:53
2	08:50	08:13	07:08		07:35 (B14)	06:46		05:30	06:18 (B22)	04:35
	15:50	16:48	17:50	16	07:51 (B14)	19:55		20:58	13 06:31 (B22)	21:54
3	08:50	08:11	07:06		07:33 (B14)	06:43		05:28	06:21 (B22)	04:34
	15:51	16:50	17:52	21	07:54 (B14)	19:57		21:00	8 06:29 (B22)	21:55
4	08:50	08:09	07:03		07:31 (B14)	06:41		05:26		04:33
	15:52	16:52	17:54	24	07:55 (B14)	19:59		21:02		21:57
5	08:49	08:07	07:01		07:29 (B14)	06:38		05:24		04:32
	15:54	16:54	17:56	26	07:55 (B14)	20:01		21:04		21:58
6	08:49	08:05	06:58		07:29 (B14)	06:36		05:21		04:31
	15:55	16:56	17:58	28	07:57 (B14)	20:03		21:06		21:59
7	08:48	08:03	06:55		07:27 (B14)	06:33		05:19		04:30
	15:56	16:59	18:01	30	07:57 (B14)	20:06		21:08		22:00
8	08:48	08:01	06:53		07:26 (B14)	06:30		05:17		04:29
	15:58	17:01	18:03	31	07:57 (B14)	20:08		21:10		22:01
9	08:47	07:58	06:50		07:26 (B14)	06:28		05:15		04:29
	16:00	17:03	18:05	32	07:58 (B14)	20:10		21:12		22:02
10	08:46	07:56	06:48		07:26 (B14)	06:25		05:13		04:28
	16:01	17:05	18:07	31	07:57 (B14)	20:12		21:14		22:03
11	08:45	07:54	06:45		07:25 (B14)	06:22		05:11		04:27
	16:03	17:08	18:09	32	07:57 (B14)	20:14		21:16		22:04
12	08:44	07:52	06:42		07:25 (B14)	06:20		05:09		04:27
	16:05	17:10	18:11	32	07:57 (B14)	20:16		21:18		22:05
13	08:43	07:50	06:40		07:25 (B14)	06:17		05:07		04:27
	16:06	17:12	18:13	31	07:56 (B14)	20:18		21:20		22:06
14	08:42	07:47	06:37		07:25 (B14)	06:15		05:05		04:26
	16:08	17:14	18:15	30	07:55 (B14)	20:20		21:22		22:07
15	08:41	07:45	06:34		07:26 (B14)	06:12		05:03		04:26
	16:10	17:17	18:18	29	07:55 (B14)	20:22		21:24		22:07
16	08:40	07:43	06:32		07:26 (B14)	06:09		05:01		04:26
	16:12	17:19	18:20	27	07:53 (B14)	20:24		21:25		22:08
17	08:39	07:40	06:29		07:27 (B14)	06:07		04:59		04:25
	16:14	17:21	18:22	25	07:52 (B14)	20:26		21:27		22:08
18	08:38	07:38	06:26		07:28 (B14)	06:04	06:30 (B22)	04:57		04:25
	16:16	17:23	18:24	22	07:50 (B14)	20:28	06:32 (B22)	21:29		22:09
19	08:36	07:36	06:24		07:30 (B14)	06:02	06:28 (B22)	04:55		04:25
	16:18	17:26	18:26	18	07:48 (B14)	20:31	06:34 (B22)	21:31		22:09
20	08:35	07:33	06:21		07:32 (B14)	05:59	06:26 (B22)	04:53		04:25
	16:20	17:28	18:28	13	07:45 (B14)	20:33	06:36 (B22)	21:33		22:10
21	08:33	07:31	06:18			05:57	06:23 (B22)	04:52		04:25
	16:22	17:30	18:30			20:35	06:36 (B22)	21:35		22:10
22	08:32	07:28	06:16			05:54	06:21 (B22)	04:50		04:26
	16:24	17:32	18:32			20:37	06:37 (B22)	21:37		22:10
23	08:30	07:26	06:13			05:52	06:18 (B22)	04:48		04:26
	16:26	17:34	18:34			20:39	06:36 (B22)	21:38		22:10
24	08:29	07:23	06:10			05:49	06:16 (B22)	04:47		04:26
	16:28	17:37	18:36			20:41	06:37 (B22)	21:40		22:10
25	08:27	07:21	06:08			05:47	06:15 (B22)	04:45		04:27
	16:30	17:39	18:39			20:43	06:37 (B22)	21:42		22:10
26	08:26	07:18	06:05			05:44	06:15 (B22)	04:44		04:27
	16:32	17:41	18:41			20:45	06:36 (B22)	21:43		22:10
27	08:24	07:16	06:02			05:42	06:15 (B22)	04:42		04:27
	16:34	17:43	18:43			20:47	06:36 (B22)	21:45		22:10
28	08:22	07:13	06:00			05:40	06:15 (B22)	04:41		04:28
	16:37	17:45	18:45			20:49	06:36 (B22)	21:47		22:10
29	08:20		06:57			05:37	06:16 (B22)	04:40		04:29
	16:39		19:47			20:51	06:35 (B22)	21:48		22:10
30	08:19		06:54			05:35	06:17 (B22)	04:38		04:29
	16:41		19:49			20:53	06:34 (B22)	21:50		22:09
31	08:17		06:51					04:37		
	16:43		19:51					21:51		
Potential sun hours	235	266	366		426		508			529
Total, worst case				508		207		36		
Sun reduction				0.41		0.50		0.57		
Oper. time red.				0.98		0.98		0.98		
Wind dir. red.				0.62		0.65		0.65		
Total reduction				0.25		0.32		0.36		
Total, real				127		66		13		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Landzani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (124)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	08:05 (B14)	07:23
	22:09	21:28	20:14	18:54	31 08:36 (B14)	16:36
2	04:31	05:18	06:19	07:19	08:04 (B14)	07:25
	22:09	21:26	20:11	18:51	32 08:36 (B14)	16:34
3	04:32	05:20	06:21	07:21	08:04 (B14)	07:27
	22:08	21:24	20:09	18:48	31 08:35 (B14)	16:32
4	04:33	05:22	06:23	07:23	08:03 (B14)	07:29
	22:07	21:22	20:06	18:46	32 08:35 (B14)	16:30
5	04:34	05:23	06:25	07:25	08:03 (B14)	07:31
	22:07	21:20	20:03	18:43	31 08:34 (B14)	16:27
6	04:35	05:25	06:27	07:28	08:03 (B14)	07:33
	22:06	21:17	20:01	18:40	30 08:33 (B14)	16:25
7	04:36	05:27	06:29	07:30	08:03 (B14)	07:36
	22:05	21:15	19:58	18:38	29 08:32 (B14)	16:23
8	04:37	05:29	06:31	07:32	08:04 (B14)	07:38
	22:04	21:13	19:56	18:35	27 08:31 (B14)	16:21
9	04:38	05:31	06:33	07:34	08:05 (B14)	07:40
	22:03	21:11	19:53	18:33	26 08:31 (B14)	16:19
10	04:40	05:33	06:35	07:36	08:06 (B14)	07:42
	22:02	21:08	19:50	18:30	23 08:29 (B14)	16:17
11	04:41	05:35	06:37	07:38	08:08 (B14)	07:44
	22:01	21:06	19:47	18:27	19 08:27 (B14)	16:15
12	04:42	05:37	06:39	07:40	08:10 (B14)	07:46
	22:00	21:04	19:45	18:25	14 08:24 (B14)	16:13
13	04:44	05:39	06:41	07:42	08:14 (B14)	07:49
	21:59	21:02	19:42	18:22	5 08:19 (B14)	16:11
14	04:45	05:41	06:43	07:44	08:19 (B14)	16:11
	21:58	20:59	19:39	18:20	16:10	15:38
15	04:46	05:43	06:45	07:46	08:23 (B14)	07:53
	21:57	20:57	19:37	18:17	16:08	15:38
16	04:48	05:45	06:47	07:48	08:27 (B14)	07:55
	21:55	20:54	19:34	18:15	16:06	15:38
17	04:49	05:47	06:49	07:50	08:31 (B14)	07:57
	21:54	20:52	19:31	18:12	16:04	15:38
18	04:51	05:49	06:51	07:52	08:35 (B14)	07:59
	21:52	20:50	19:29	18:09	16:03	15:38
19	04:53	05:51	06:53	07:55	08:39 (B14)	08:01
	21:51	20:47	19:26	18:07	16:01	15:38
20	04:54	05:53	06:55	07:57	08:43 (B14)	08:03
	21:49	20:45	19:23	18:04	15:59	15:39
21	04:56	05:55	06:57	07:59	08:47 (B14)	08:05
	21:48	20:42	19:21	18:02	15:58	15:39
22	04:58	05:57	06:59	08:01	08:49 (B14)	08:07
	21:46	20:40	19:18	18:00	15:56	15:40
23	04:59	05:59	07:01	08:03	08:51 (B14)	08:09
	21:45	20:37	19:15	17:57	15:55	15:40
24	05:01	06:01	07:03	08:05	08:55 (B14)	08:11
	21:43	20:35	19:12	17:55	15:53	15:41
25	05:03	06:03	07:05	08:07	08:59 (B14)	08:13
	21:41	20:32	19:10	17:52	15:52	15:41
26	05:05	06:05	07:07	08:09	08:61 (B14)	08:15
	21:39	20:30	19:07	17:50	15:51	15:42
27	05:06	06:07	07:09	08:11	08:63 (B14)	08:17
	21:38	20:27	19:04	17:48	15:50	15:43
28	05:08	06:09	07:11	08:13	08:65 (B14)	08:19
	21:36	20:24	19:02	17:46	15:48	15:44
29	05:10	06:11	07:13	08:15	08:67 (B14)	08:21
	21:34	20:22	18:59	17:43	15:47	15:45
30	05:12	06:13	07:15	08:17	08:69 (B14)	08:22
	21:32	20:19	18:56	17:41	15:46	15:46
31	05:14	06:15		07:20	08:71 (B14)	08:51
	21:30	20:17		16:38	15:47	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		245	188	330		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.65	0.62	0.62		
Total reduction		0.32	0.26	0.16		
Total, real		78	49	52		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Landzani 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (75)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48	22 07:37 (B14) 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	19 08:15 (B14) 08:34 (B14)	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	25 07:35 (B14) 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	21 08:14 (B14) 08:35 (B14)	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	26 07:35 (B14) 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	24 08:12 (B14) 08:36 (B14)	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	27 07:34 (B14) 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	25 08:11 (B14) 08:36 (B14)	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	28 07:33 (B14) 19:58	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:25 18:43	26 08:10 (B14) 08:36 (B14)	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	28 07:33 (B14) 19:58	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	27 08:09 (B14) 08:36 (B14)	07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	27 07:33 (B14) 19:58	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	27 08:09 (B14) 08:36 (B14)	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	27 07:33 (B14) 19:58	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	28 08:08 (B14) 08:36 (B14)	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	26 07:33 (B14) 19:58	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	27 08:09 (B14) 08:36 (B14)	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	24 07:34 (B14) 19:58	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	27 08:09 (B14) 08:36 (B14)	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	23 07:34 (B14) 19:57	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	26 08:09 (B14) 08:35 (B14)	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	20 07:36 (B14) 19:58	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:25	07:40 18:25	24 08:09 (B14) 08:33 (B14)	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	16 07:37 (B14) 19:57	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:42 19:42	07:42 18:22	21 08:11 (B14) 08:32 (B14)	07:47 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	11 07:39 (B14) 19:58	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	17 08:13 (B14) 08:30 (B14)	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	13 08:16 (B14) 08:29 (B14)	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	8 08:18 (B14) 08:26 (B14)	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38	
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:03	08:47 15:38	
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	07:55 16:01	08:48 15:38	
20	08:35 16:20	07:33 17:28	06:23 18:28	06:21 20:33	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	07:57 15:59	08:49 15:39	
21	08:33 16:22	07:31 17:30	06:18 18:30	06:18 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	07:59 15:58	08:49 15:39	
22	08:32 16:24	07:28 17:32	06:16 18:32	06:16 20:37	04:54 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:01 15:56	08:49 15:40	
23	08:30 16:26	07:26 17:34	06:13 18:34	06:13 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:03 15:55	08:50 15:40	
24	08:29 16:28	07:23 17:37	06:10 18:36	06:10 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:05 15:53	08:51 15:41	
25	08:27 16:30	07:21 17:39	06:08 18:39	06:08 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:07	08:07 17:52	08:07 15:52	08:51 15:41	
26	08:26 16:32	07:18 17:41	06:05 18:41	06:05 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:10 19:07	08:08 17:50	08:08 15:51	08:51 15:42	
27	08:24 16:34	07:16 17:43	06:02 18:43	06:02 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:09 17:48	08:09 15:50	08:51 15:43	
28	08:22 16:37	07:13 17:45	06:00 18:45	06:00 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:10 17:44	08:10 15:48	08:51 15:44	
29	08:20 16:39	07:11 17:47	05:57 18:47	05:57 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	7 08:22 (B14) 08:29 (B14)	07:16 16:43	08:51 15:45	
30	08:19 16:41	07:03 17:49	05:54 18:49	05:54 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	14 08:18 (B14) 08:32 (B14)	07:18 16:41	08:52 15:46	
31	08:17 16:43	07:01 17:51	05:52 18:51	05:52 21:51	04:37 21:51	04:37 21:51	05:14 21:30	06:15 20:17	07:20 16:38	07:20 16:38	07:20 15:47	08:51 15:47	
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216	
Total, worst case		47	330						21	360			
Sun reduction		0.20	0.41						0.43	0.26			
Oper. time red.		0.98	0.98						0.98	0.98			
Wind dir. red.		0.62	0.62						0.62	0.62			
Total reduction		0.12	0.25						0.26	0.16			
Total real		6	83						5	57			

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Landzani 4 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (159)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48		06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14		07:17 18:54	24	07:57 (B14) 08:21 (B14)	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50		06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11		07:19 18:51	25	07:56 (B14) 08:21 (B14)	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	5	07:32 (B14) 07:37 (B14)	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	25	07:56 (B14) 08:21 (B14)	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	10	07:29 (B14) 07:39 (B14)	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	24	07:56 (B14) 08:20 (B14)	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	14	07:26 (B14) 07:40 (B14)	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	24	07:56 (B14) 08:20 (B14)	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	18	07:24 (B14) 07:42 (B14)	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	23	07:56 (B14) 08:19 (B14)	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	21	07:21 (B14) 07:42 (B14)	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	20	07:58 (B14) 08:18 (B14)	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	23	07:19 (B14) 07:42 (B14)	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	16	08:00 (B14) 08:16 (B14)	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	24	07:19 (B14) 07:43 (B14)	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	12	08:03 (B14) 08:15 (B14)	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	25	07:18 (B14) 07:43 (B14)	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	8	08:05 (B14) 08:13 (B14)	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	25	07:17 (B14) 07:42 (B14)	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	1	08:07 (B14) 08:08 (B14)	07:44 16:15	08:39 15:39
12	08:44 16:04	07:52 17:10	06:42 18:11	24	07:18 (B14) 07:42 (B14)	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25		07:49 16:13	07:46 15:38	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	23	07:18 (B14) 07:41 (B14)	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22		07:49 16:11	07:49 15:38	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	22	07:18 (B14) 07:40 (B14)	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20		07:51 16:10	08:43 15:38	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	21	07:19 (B14) 07:40 (B14)	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17		07:53 16:08	08:44 15:38	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	18	07:20 (B14) 07:38 (B14)	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15		07:55 16:06	08:45 15:38	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	14	07:21 (B14) 07:35 (B14)	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12		07:57 16:04	08:46 15:38	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	7	07:25 (B14) 07:32 (B14)	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09		07:59 16:03	08:46 15:38	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26		06:02 20:31	04:55 21:31	04:55 22:09	04:53 21:51	05:51 20:47	06:53 19:26		07:55 18:07		08:01 16:01	08:47 15:38	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28		05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23		07:57 18:04		08:03 15:59	08:48 15:39	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30		05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21		07:59 18:02		08:05 15:58	08:49 15:39	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32		05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18		08:01 18:00		08:07 15:56	08:49 15:40	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34		05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15		08:03 17:57		08:09 15:55	08:50 15:40	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12		08:05 17:55		08:11 15:53	08:50 15:41	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:11 (B14) 08:12 (B14)	07:07 16:52	1	08:13 (B14) 08:12 (B14)	08:50 15:41	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41		05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:05 (B14) 08:17 (B14)	07:10 16:50	12	08:19 (B14) 08:02 (B14)	08:51 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:19 (B14) 08:20 (B14)	07:12 16:48	17	08:01 (B14) 08:21 (B14)	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45		05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:01 (B14) 08:21 (B14)	07:14 16:45	19	07:59 (B14) 08:21 (B14)	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47		05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:59 (B14) 08:21 (B14)	07:16 16:43	22	07:18 (B14) 08:21 (B14)	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49		05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:58 (B14) 08:21 (B14)	07:18 16:41	23	07:18 (B14) 08:21 (B14)	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51			04:37 21:51		05:14 21:30	06:15 20:17			07:20 16:38			08:51 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	529	529	469	385		324		247	216	
Total, worst case			294								94		202			
Sun reduction			0.41								0.43		0.26			
Oper. time red.			0.98								0.98		0.98			
Wind dir. red.			0.62								0.62		0.62			
Total reduction			0.25								0.26		0.16			
Total, real			73								24		32			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Landzani 5 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (133)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	07:42 (B14) 19:53	06:49 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	07:42 (B14) 19:55	06:46 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	07:42 (B14) 19:57	06:44 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	08:27 (B14) 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	07:42 (B14) 19:59	06:41 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	08:24 (B14) 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	07:42 (B14) 20:01	06:38 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:25 18:43	08:21 (B14) 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	07:43 (B14) 20:03	06:36 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:20 (B14) 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	07:43 (B14) 20:06	06:33 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:18 (B14) 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	07:44 (B14) 20:06	06:30 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:17 (B14) 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	07:46 (B14) 20:10	06:28 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:17 (B14) 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	07:47 (B14) 20:12	06:25 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:16 (B14) 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	07:59 (B14) 20:12	06:22 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:16 (B14) 16:15	08:39 15:39
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13	08:43 16:06	07:50 17:12	06:40 18:13	06:40 20:18	06:17 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:15 (B14) 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:37 20:20	06:15 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:15 (B14) 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:34 20:22	06:12 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:17 (B14) 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:32 20:24	06:09 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:18 (B14) 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:29 20:26	06:07 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:20 (B14) 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:26 20:28	06:04 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09	08:22 (B14) 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:24 20:31	06:02 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:25 (B14) 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:27 (B14) 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	06:18 20:35	05:57 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	07:55 (B14) 08:01 (B14)	06:16 18:32	05:54 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	07:53 (B14) 08:04 (B14)	06:13 18:34	05:52 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	07:50 (B14) 08:05 (B14)	06:10 18:36	05:49 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	07:48 (B14) 08:07 (B14)	06:08 18:39	05:47 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	07:45 (B14) 08:08 (B14)	06:05 18:41	05:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	07:43 (B14) 08:08 (B14)	06:02 18:43	05:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	07:43 (B14) 08:09 (B14)	06:00 18:45	05:40 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39			06:57 19:47	05:37 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41			06:54 19:49	05:35 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43			06:52 19:51	05:33 21:51		05:14 21:30	06:15 20:17	07:20 16:38		08:23 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction		125	225							361		
Oper. time red.		0.20	0.41							0.26		
Wind dir. red.		0.98	0.98							0.98		
Total reduction		0.63	0.63							0.63		
Total, real		0.12	0.25							0.16		
		15	57							57		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Latvian - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (168)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
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18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Lauri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (49)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
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9	08:47 15:59	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
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11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
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16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
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19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:41
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
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31	08:17 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Lazdas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (68)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
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15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
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24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	05:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:51 15:41
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Leiš ūpi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (31)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
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9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
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16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
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20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Lejas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (156)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
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18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Lejas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (128)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Lidijas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (51)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
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20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
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26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Lieknas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (100)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:54 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Liepsala - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (88)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		09:34 (B12)	08:15		09:09 (B11)	07:11			06:49		07:14 (B23)	05:32			04:36		05:24 (B15)
	15:48	20	09:54 (B12)	16:45	31	09:40 (B11)	17:47			19:53	59	08:30 (B18)	20:55			21:52	24	05:48 (B15)
2	08:50		09:33 (B12)	08:13		09:09 (B11)	07:08			06:46		07:11 (B23)	05:30			04:35		05:23 (B15)
	15:49	21	09:54 (B12)	16:47	32	09:41 (B11)	17:50			19:55	63	08:29 (B18)	20:57			21:54	26	05:49 (B15)
3	08:50		09:34 (B12)	08:11		09:09 (B11)	07:05			06:43		07:09 (B23)	05:28			04:34		05:23 (B15)
	15:51	21	09:55 (B12)	16:50	32	09:41 (B11)	17:52			19:57	66	08:29 (B18)	20:59			21:55	27	05:50 (B15)
4	08:50		09:34 (B12)	08:09		09:10 (B11)	07:03			06:41		07:08 (B23)	05:26			04:33		05:22 (B15)
	15:52	22	09:56 (B12)	16:52	32	09:42 (B11)	17:54			19:59	68	08:29 (B18)	21:01			21:56	28	05:50 (B15)
5	08:49		09:34 (B12)	08:07		09:09 (B11)	07:00			06:38		07:07 (B23)	05:23			04:32		05:22 (B15)
	15:53	22	09:56 (B12)	16:54	32	09:41 (B11)	17:56			20:01	69	08:28 (B18)	21:03			21:58	30	05:52 (B15)
6	08:49		09:35 (B12)	08:05		09:10 (B11)	06:58			06:35		07:07 (B23)	05:21			04:31		05:22 (B15)
	15:55	22	09:57 (B12)	16:56	31	09:41 (B11)	17:58			20:03	69	08:28 (B18)	21:05			21:59	30	05:52 (B15)
7	08:48		09:35 (B12)	08:02		09:11 (B11)	06:55			06:33		07:06 (B23)	05:19			04:30		05:21 (B15)
	15:56	23	09:58 (B12)	16:58	30	09:41 (B11)	18:00			20:05	69	08:27 (B18)	21:08			22:00	31	05:52 (B15)
8	08:47		09:35 (B12)	08:00		09:11 (B11)	06:53			06:30		07:05 (B23)	05:17			04:29		05:22 (B15)
	15:58	23	09:58 (B12)	17:01	30	09:41 (B11)	18:02			20:07	68	08:26 (B18)	21:10			22:01	31	05:53 (B15)
9	08:47		09:36 (B12)	07:58		09:11 (B11)	06:50			06:27		07:06 (B23)	05:15			04:28		05:21 (B15)
	15:59	23	09:59 (B12)	17:03	29	09:40 (B11)	18:05			20:09	67	08:26 (B18)	21:12			22:02	32	05:53 (B15)
10	08:46		09:36 (B12)	07:56		09:13 (B11)	06:47			06:25		07:06 (B23)	05:12			04:28		05:21 (B15)
	16:01	24	10:00 (B12)	17:05	26	09:39 (B11)	18:07			20:12	65	08:25 (B18)	21:14			22:03	33	05:54 (B15)
11	08:45		09:36 (B12)	07:54		09:13 (B11)	06:45			06:22		07:07 (B23)	05:10			04:27		05:21 (B15)
	16:03	24	10:00 (B12)	17:07	24	09:37 (B11)	18:09			20:14	62	08:24 (B18)	21:16			22:04	33	05:54 (B15)
12	08:44		09:36 (B12)	07:52		09:15 (B11)	06:42			06:20		07:07 (B23)	05:08			04:27		05:21 (B15)
	16:04	24	10:00 (B12)	17:10	22	09:37 (B11)	18:11			20:16	59	08:23 (B18)	21:18			22:05	34	05:55 (B15)
13	08:43		09:37 (B12)	07:49		09:17 (B11)	06:39			06:17		07:08 (B23)	05:06			04:26		05:21 (B15)
	16:06	24	10:01 (B12)	17:12	18	09:35 (B11)	18:13			20:18	55	08:22 (B18)	21:19			22:06	34	05:55 (B15)
14	08:42		09:37 (B12)	07:47		09:19 (B11)	06:37			06:14		07:09 (B23)	05:04			04:26		05:21 (B15)
	16:08	24	10:01 (B12)	17:14	13	09:32 (B11)	18:15			20:20	48	08:20 (B18)	21:21			22:06	34	05:55 (B15)
15	08:41		09:37 (B12)	07:45			06:34			06:12		07:13 (B23)	05:02			04:26		05:21 (B15)
	16:10	24	10:01 (B12)	17:16			18:17			20:22	39	08:19 (B18)	21:23			22:07	35	05:56 (B15)
16	08:40		09:38 (B12)	07:42			06:31			06:09		07:47 (B18)	05:00			04:25		05:21 (B15)
	16:12	24	10:02 (B12)	17:19			18:19			20:24	29	08:16 (B18)	21:25			22:08	35	05:56 (B15)
17	08:39		09:38 (B12)	07:40			06:29			06:07		07:49 (B18)	04:59			04:25		05:21 (B15)
	16:14	23	10:01 (B12)	17:21			18:22			20:26	25	08:14 (B18)	21:27			22:08	35	05:56 (B15)
18	08:37		09:39 (B12)	07:38			06:26			06:04		07:50 (B18)	04:57			04:25		05:21 (B15)
	16:16	23	10:02 (B12)	17:23			18:24			20:28	21	08:11 (B18)	21:29			22:09	36	05:57 (B15)
19	08:36		09:40 (B12)	07:35			06:23			06:02		07:54 (B18)	04:55			04:25		05:22 (B15)
	16:18	21	10:01 (B12)	17:25			18:26			20:30	14	08:08 (B18)	21:31			22:09	35	05:57 (B15)
20	08:35		09:16 (B11)	07:33			06:21			05:59			04:53			04:25		05:22 (B15)
	16:20	32	10:01 (B12)	17:28			18:28			20:32			21:33			22:10	35	05:57 (B15)
21	08:33		09:15 (B11)	07:31			06:18		07:05 (B18)	05:57			04:51			04:25		05:22 (B15)
	16:22	34	10:01 (B12)	17:30			18:30	11	07:16 (B18)	20:34			21:35			22:10	35	05:57 (B15)
22	08:32		09:14 (B11)	07:28			06:15		07:00 (B18)	05:54			04:50			04:25		05:23 (B15)
	16:24	35	10:00 (B12)	17:32			18:32	19	07:19 (B18)	20:37			21:36			22:10	35	05:58 (B15)
23	08:30		09:12 (B11)	07:26			06:13		06:57 (B18)	05:52			04:48			04:26		05:23 (B15)
	16:26	36	09:59 (B12)	17:34			18:34	26	07:23 (B18)	20:39			21:38			22:10	35	05:58 (B15)
24	08:29		09:11 (B11)	07:23			06:10		06:54 (B18)	05:49			04:47			04:26		05:23 (B15)
	16:28	36	09:58 (B12)	17:36			18:36	30	07:24 (B18)	20:41			21:40			22:10	35	05:58 (B15)
25	08:27		09:11 (B11)	07:21			06:07		06:52 (B18)	05:47			04:45			04:26		05:23 (B15)
	16:30	33	09:56 (B12)	17:39			18:38	33	07:25 (B18)	20:43			21:41			22:10	36	05:59 (B15)
26	08:25		09:11 (B11)	07:18			06:05		06:51 (B18)	05:44			04:44			04:27		05:23 (B15)
	16:32	26	09:37 (B11)	17:41			18:40	36	07:27 (B18)	20:45			21:43			22:10	35	05:58 (B15)
27	08:24		09:10 (B11)	07:16			06:02		06:49 (B18)	05:42			04:42		05:30 (B15)	04:27		05:24 (B15)
	16:34	28	09:38 (B11)	17:43			18:42	38	07:27 (B18)	20:47			21:45	10	05:40 (B15)	22:10	35	05:59 (B15)
28	08:22		09:10 (B11)	07:13			05:59		06:48 (B18)	05:39			04:41		05:28 (B15)	04:28		05:24 (B15)
	16:36	29	09:39 (B11)	17:45			18:45	40	07:28 (B18)	20:49			21:46	15	05:43 (B15)	22:10	34	05:58 (B15)
29	08:20		09:10 (B11)				06:57		07:47 (B18)	05:37			04:39		05:27 (B15)	04:28		05:25 (B15)
	16:38	30	09:40 (B11)				19:47	42	08:29 (B18)	20:51			21:48	18	05:45 (B15)	22:10	34	05:59 (B15)
30	08:18		09:09 (B11)				06:54		07:46 (B18)	05:35			04:38		05:26 (B15)	04:29		05:25 (B15)
	16:41	30	09:39 (B11)				19:49	43	08:29 (B18)	20:53			21:49	20	05:46 (B15)	22:09	34	05:59 (B15)
31	08:16		09:09 (B11)				06:51		07:16 (B23)				04:37		05:25 (B15)			
	16:43	31	09:40 (B11)				19:51	52	08:29 (B18)				21:51	22	05:47 (B15)			
Potential sun hours		235		266			366			426			508			529		
Total, worst case		812		382			370		1015			85			986			
Sun reduction		0.13		0.20			0.41		0.50			0.57			0.56			
Oper. time red.		0.98		0.98			0.98		0.98			0.98			0.98			
Wind dir. red.		0.60		0.59			0.64		0.65			0.67			0.67			
Total reduction		0.08		0.11			0.25		0.31			0.36			0.36			
Total, real		62		43			94		314			31			354			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Liepsala - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (88)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November			December		
1	04:30		05:25 (B15)	05:16			06:17		07:05 (B23)	07:17			07:22		08:42 (B11)	08:24		09:17 (B12)
	22:09	33	05:58 (B15)	21:28			20:14	63	08:23 (B18)	18:53			16:36	27	09:09 (B11)	15:45	24	09:41 (B12)
2	04:31		05:26 (B15)	05:17			06:19		07:05 (B23)	07:19			07:25		08:41 (B11)	08:26		09:18 (B12)
	22:08	33	05:59 (B15)	21:26			20:11	65	08:24 (B18)	18:51			16:34	28	09:09 (B11)	15:44	24	09:42 (B12)
3	04:32		05:26 (B15)	05:19			06:21		07:04 (B23)	07:21			07:27		08:40 (B11)	08:27		09:19 (B12)
	22:08	33	05:59 (B15)	21:24			20:09	67	08:24 (B18)	18:48			16:31	30	09:10 (B11)	15:43	23	09:42 (B12)
4	04:32		05:27 (B15)	05:21			06:23		07:02 (B23)	07:23			07:29		08:40 (B11)	08:29		09:19 (B12)
	22:07	32	05:59 (B15)	21:21			20:06	68	08:23 (B18)	18:45			16:29	31	09:11 (B11)	15:42	24	09:43 (B12)
5	04:33		05:27 (B15)	05:23			06:25		07:02 (B23)	07:25			07:31		08:39 (B11)	08:31		09:20 (B12)
	22:06	32	05:59 (B15)	21:19			20:03	69	08:23 (B18)	18:43			16:27	32	09:11 (B11)	15:41	23	09:43 (B12)
6	04:35		05:28 (B15)	05:25			06:27		07:02 (B23)	07:27			07:33		08:40 (B11)	08:32		09:21 (B12)
	22:06	31	05:59 (B15)	21:17			20:01	69	08:23 (B18)	18:40			16:25	32	09:12 (B11)	15:41	23	09:44 (B12)
7	04:36		05:29 (B15)	05:27			06:29		07:02 (B23)	07:29			07:35		08:39 (B11)	08:34		09:21 (B12)
	22:05	29	05:58 (B15)	21:15			19:58	69	08:23 (B18)	18:38			16:23	32	09:11 (B11)	15:40	22	09:43 (B12)
8	04:37		05:29 (B15)	05:29			06:31		07:02 (B23)	07:31			07:38		08:39 (B11)	08:35		09:22 (B12)
	22:04	29	05:58 (B15)	21:13			19:55	68	08:23 (B18)	18:35			16:21	32	09:11 (B11)	15:40	22	09:44 (B12)
9	04:38		05:30 (B15)	05:31			06:33		07:03 (B23)	07:33			07:40		08:40 (B11)	08:36		09:22 (B12)
	22:03	27	05:57 (B15)	21:11			19:53	66	08:23 (B18)	18:32			16:19	32	09:12 (B11)	15:39	21	09:43 (B12)
10	04:39		05:30 (B15)	05:33			06:35		07:04 (B23)	07:36			07:42		08:40 (B11)	08:38		09:23 (B12)
	22:02	27	05:57 (B15)	21:08			19:50	63	08:22 (B18)	18:30			16:17	31	09:11 (B11)	15:39	21	09:44 (B12)
11	04:41		05:31 (B15)	05:35			06:37		07:06 (B23)	07:38			07:44		08:40 (B11)	08:39		09:24 (B12)
	22:01	25	05:56 (B15)	21:06			19:47	59	08:22 (B18)	18:27			16:15	32	09:12 (B11)	15:38	20	09:44 (B12)
12	04:42		05:32 (B15)	05:37			06:39		07:08 (B23)	07:40			07:46		08:41 (B11)	08:40		09:24 (B12)
	22:00	23	05:55 (B15)	21:04			19:45	53	08:21 (B18)	18:24			16:13	30	09:11 (B11)	15:38	20	09:44 (B12)
13	04:43		05:34 (B15)	05:39			06:41		07:37 (B18)	07:42			07:48		08:42 (B11)	08:41		09:25 (B12)
	21:59	21	05:55 (B15)	21:01			19:42	43	08:20 (B18)	18:22			16:11	30	09:12 (B11)	15:38	20	09:45 (B12)
14	04:45		05:35 (B15)	05:41			06:43		07:37 (B18)	07:44			07:51		08:42 (B11)	08:42		09:26 (B12)
	21:58	19	05:54 (B15)	20:59			19:39	42	08:19 (B18)	18:19			16:09	29	09:11 (B11)	15:38	19	09:45 (B12)
15	04:46		05:36 (B15)	05:43			06:45		07:38 (B18)	07:46			07:53		08:42 (B11)	08:43		09:26 (B12)
	21:56	16	05:52 (B15)	20:57			19:36	40	08:18 (B18)	18:17			16:07	28	09:10 (B11)	15:38	19	09:45 (B12)
16	04:48		05:38 (B15)	05:45			06:47		07:38 (B18)	07:48			07:55		08:44 (B11)	08:44		09:27 (B12)
	21:55	13	05:51 (B15)	20:54			19:34	39	08:17 (B18)	18:14			16:06	26	09:10 (B11)	15:38	19	09:46 (B12)
17	04:49		05:41 (B15)	05:47			06:49		07:39 (B18)	07:50			07:57		08:45 (B11)	08:45		09:28 (B12)
	21:54	7	05:48 (B15)	20:52			19:31	37	08:16 (B18)	18:12			16:04	33	09:30 (B12)	15:38	18	09:46 (B12)
18	04:51			05:49			06:51		07:39 (B18)	07:52			07:59		08:45 (B11)	08:46		09:29 (B12)
	21:52			20:49			19:28	34	08:13 (B18)	18:09			16:02	36	09:32 (B12)	15:38	17	09:46 (B12)
19	04:52			05:51			06:53		07:41 (B18)	07:54			08:01		08:47 (B11)	08:47		09:28 (B12)
	21:51			20:47			19:26	30	08:11 (B18)	18:07			16:01	36	09:34 (B12)	15:38	18	09:46 (B12)
20	04:54			05:53			06:55		07:42 (B18)	07:56			08:03		08:49 (B11)	08:48		09:29 (B12)
	21:49			20:44			19:23	27	08:09 (B18)	18:04			15:59	35	09:35 (B12)	15:38	18	09:47 (B12)
21	04:56			05:55			06:57		07:44 (B18)	07:59			08:05		08:50 (B11)	08:48		09:29 (B12)
	21:48			20:42			19:20	22	08:06 (B18)	18:02			15:57	34	09:36 (B12)	15:39	18	09:47 (B12)
22	04:57			05:57			06:59		07:48 (B18)	08:01			08:07		08:52 (B11)	08:49		09:30 (B12)
	21:46			20:39			19:18	14	08:02 (B18)	17:59			15:56	32	09:37 (B12)	15:39	18	09:48 (B12)
23	04:59			05:59			07:01			08:03			08:09		09:17 (B12)	08:49		09:30 (B12)
	21:44			20:37			19:15			17:57			15:55	21	09:38 (B12)	15:40	18	09:48 (B12)
24	05:01		06:01		07:57 (B18)		07:03			08:05			08:11		09:17 (B12)	08:50		09:31 (B12)
	21:43		20:34	15	08:12 (B18)		19:12			17:54			15:53	22	09:39 (B12)	15:40	18	09:49 (B12)
25	05:03		06:03		07:53 (B18)		07:05			07:07			08:13		09:16 (B12)	08:50		09:31 (B12)
	21:41		20:32	21	08:14 (B18)		19:10			16:52			15:52	23	09:39 (B12)	15:41	18	09:49 (B12)
26	05:04		06:05		07:50 (B18)		07:07			07:09			08:15		09:16 (B12)	08:50		09:32 (B12)
	21:39		20:29	26	08:16 (B18)		19:07			16:50			15:51	24	09:40 (B12)	15:42	18	09:50 (B12)
27	05:06		06:07		07:48 (B18)		07:09			07:12		08:52 (B11)	08:17		09:16 (B12)	08:51		09:32 (B12)
	21:37		20:27	30	08:18 (B18)		19:04			16:47	7	08:59 (B11)	15:49	24	09:40 (B12)	15:43	18	09:50 (B12)
28	05:08		06:09		07:13 (B23)		07:11			07:14		08:48 (B11)	08:19		09:16 (B12)	08:51		09:32 (B12)
	21:35		20:24	40	08:20 (B18)		19:01			16:45	14	09:02 (B11)	15:48	24	09:40 (B12)	15:44	19	09:51 (B12)
29	05:10		06:11		07:10 (B23)		07:13			07:16		08:46 (B11)	08:20		09:18 (B12)	08:51		09:33 (B12)
	21:34		20:22	49	08:21 (B18)		18:59			16:43	19	09:05 (B11)	15:47	24	09:42 (B12)	15:44	19	09:52 (B12)
30	05:12		06:13		07:08 (B23)		07:15			07:18		08:44 (B11)	08:22		09:18 (B12)	08:51		09:33 (B12)
	21:32		20:19	55	08:22 (B18)		18:56			16:40	22	09:06 (B11)	15:46	24	09:42 (B12)	15:45	20	09:53 (B12)
31	05:14		06:15		07:07 (B23)					07:20		08:42 (B11)				08:51		09:33 (B12)
	21:30		20:16	58	08:22 (B18)					16:38	25	09:07 (B11)				15:47	20	09:53 (B12)
Potential sun hours	529		469				385			324			247			216		
Total, worst case		430		294			1107			87			874			619		
Sun reduction		0.49		0.50			0.43			0.26			0.08			0.07		
Oper. time red.		0.98		0.98			0.98			0.98			0.98			0.98		
Wind dir. red.		0.67		0.65			0.65			0.59			0.60			0.61		
Total reduction		0.32		0.31			0.26			0.15			0.05			0.04		
Total, real		136		90			292			13			41			25		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Liciš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (84)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	08:57 (B22) 17:48	07:11 19:53	06:49 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:23 16:36	08:30 (B22) 15:45
2	08:51 15:49	08:13 16:47	08:57 (B22) 17:50	07:08 19:55	06:46 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	06:19 18:51	07:25 16:34	08:29 (B22) 15:44
3	08:50 15:51	08:11 16:50	08:58 (B22) 17:52	07:06 19:57	06:43 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:20 20:09	06:21 18:48	07:27 16:32	08:29 (B22) 15:43
4	08:50 15:52	08:09 16:52	08:58 (B22) 17:54	07:03 19:59	06:41 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:21 20:06	06:23 18:46	07:23 16:29	08:29 (B22) 15:42
5	08:49 15:53	08:07 16:54	08:58 (B22) 17:56	07:01 19:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 18:43	07:25 16:27	08:29 (B22) 15:42
6	08:49 15:55	08:05 16:56	08:58 (B22) 17:58	06:58 19:58	06:35 21:06	05:21 21:59	04:31 22:06	04:35 21:17	05:25 20:01	06:27 18:40	07:27 16:25	08:28 (B22) 15:41
7	08:48 15:56	08:03 16:59	08:59 (B22) 18:01	06:55 20:06	06:33 21:08	05:19 22:00	04:30 22:05	04:36 21:15	05:27 19:58	06:29 18:38	07:30 16:23	08:29 (B22) 15:40
8	08:48 15:58	08:01 17:01	08:59 (B22) 18:03	06:53 20:08	06:30 21:10	05:17 22:01	04:29 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:28 (B22) 15:40
9	08:47 15:59	07:58 17:03	08:59 (B22) 18:05	06:50 20:10	06:28 21:12	05:15 22:02	04:29 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:28 (B22) 15:39
10	08:46 16:01	07:56 17:05	09:01 (B22) 18:07	06:47 20:12	06:25 21:14	05:13 22:03	04:28 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:29 (B22) 15:39
11	08:45 16:03	07:54 17:08	09:02 (B22) 18:09	06:45 20:14	06:22 21:16	05:11 22:04	04:27 22:01	05:38 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:29 (B22) 15:38
12	08:44 16:05	07:52 17:10	09:03 (B22) 18:11	06:42 20:16	06:20 21:18	05:08 22:05	04:27 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:29 (B22) 15:38
13	08:43 16:06	07:50 17:12	09:06 (B22) 18:13	06:40 20:18	06:17 21:20	05:06 22:06	04:26 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:31 (B22) 15:38
14	08:42 16:08	07:47 17:14	09:09 (B22) 18:15	06:37 20:20	06:15 21:22	05:04 22:07	04:26 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:31 (B22) 15:38
15	08:41 16:10	07:45 17:17	09:14 (B22) 18:18	06:34 20:22	06:12 21:24	05:03 22:07	04:26 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:33 (B22) 15:38
16	08:40 16:12	07:43 17:19	09:14 (B22) 18:20	06:32 20:24	06:09 21:26	05:01 22:08	04:25 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:34 (B22) 15:38
17	08:39 16:14	07:40 17:21	09:15 (B22) 18:22	06:29 20:26	06:07 21:27	04:59 22:09	04:25 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:35 (B22) 15:38
18	08:38 16:16	07:38 17:23	09:16 (B22) 18:23	06:26 20:28	06:04 21:29	04:57 22:09	04:25 21:53	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:36 (B22) 15:38
19	08:36 16:18	07:36 17:26	09:17 (B22) 18:24	06:24 20:31	06:02 21:31	04:55 22:09	04:25 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:37 (B22) 15:38
20	08:35 16:20	07:33 17:28	09:18 (B22) 18:26	06:21 20:33	05:59 21:33	04:53 22:10	04:25 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:38 (B22) 15:39
21	08:33 16:22	07:31 17:30	09:19 (B22) 18:28	06:18 20:35	05:57 21:35	04:52 22:10	04:25 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:39 (B22) 15:39
22	08:32 16:24	07:28 17:32	09:20 (B22) 18:30	06:16 20:37	05:54 21:37	04:50 22:10	04:25 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:40 (B22) 15:39
23	08:30 16:26	07:26 17:34	09:21 (B22) 18:34	06:13 20:39	05:52 21:38	04:48 22:10	04:26 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:41 (B22) 15:40
24	08:29 16:28	07:23 17:37	09:22 (B22) 18:36	06:10 20:41	05:49 21:40	04:47 22:10	04:26 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:42 (B22) 15:41
25	08:27 16:30	07:21 17:39	09:23 (B22) 18:38	06:08 20:43	05:47 21:42	04:45 22:10	04:26 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:43 (B22) 15:41
26	08:26 16:32	07:18 17:41	09:24 (B22) 18:39	06:05 20:45	05:44 21:43	04:44 22:10	04:27 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:44 (B22) 15:42
27	08:24 16:34	07:16 17:43	09:25 (B22) 18:40	06:02 20:47	05:42 21:45	04:42 22:10	04:27 21:38	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:49	08:45 (B22) 15:43
28	08:22 16:36	07:13 17:45	09:26 (B22) 18:41	05:59 20:49	05:40 21:47	04:41 22:10	04:28 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:19 15:48	08:46 (B22) 15:44
29	08:20 16:39	07:09 17:48	09:27 (B22) 18:42	05:57 20:51	05:37 21:48	04:40 22:10	04:29 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 15:47	08:47 (B22) 15:45
30	08:19 16:41	07:07 17:53	09:28 (B22) 18:43	05:54 20:53	05:35 21:50	04:38 22:09	04:29 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:22 15:46	08:48 (B22) 15:46
31	08:17 16:43	07:05 17:59	09:29 (B22) 18:44	05:51 20:54	05:32 21:51	04:37 22:09	05:14 21:30	06:15 20:17	07:20 16:38	08:19 17:41	08:23 15:47	08:49 (B22) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	164	316								62	425	
Sun reduction	0.13	0.20								0.26	0.08	
Oper. time red.	0.98	0.98								0.98	0.98	
Wind dir. red.	0.59	0.59								0.59	0.59	
Total reduction	0.08	0.12								0.15	0.05	
Total, real	13	37								9	20	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Licu Dzirnavas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (54)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
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9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Maurini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (37)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
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22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Mazezeri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (151)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:24 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
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23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	07:14 16:45	08:18 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Medni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (190)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:51	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:08	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:03	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:41 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:43 17:19	06:31 18:19	06:09 20:24	05:00 21:26	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:38 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:53	05:49 20:50	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:11	05:00 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:11	05:02 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:10	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:17		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Meistari - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (85)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	6 07:14 (B14) 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	17 07:02 (B14) 17 07:19 (B14)	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	10 07:11 (B14) 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	18 07:01 (B14) 18 07:19 (B14)	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	14 07:09 (B14) 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	20 07:00 (B14) 20 07:20 (B14)	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	17 07:06 (B14) 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	21 06:59 (B14) 21 07:20 (B14)	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	20 07:03 (B14) 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	21 06:59 (B14) 21 07:20 (B14)	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	21 07:02 (B14) 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	20 06:59 (B14) 20 07:19 (B14)	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	21 07:02 (B14) 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	20 06:59 (B14) 20 07:19 (B14)	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	21 07:02 (B14) 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	20 07:00 (B14) 17 07:17 (B14)	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	20 07:02 (B14) 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	14 07:02 (B14) 14 07:16 (B14)	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	18 07:02 (B14) 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	11 07:04 (B14) 11 07:15 (B14)	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	17 07:03 (B14) 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	7 07:06 (B14) 7 07:13 (B14)	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	13 07:04 (B14) 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	1 07:08 (B14) 1 07:09 (B14)	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	9 07:15 (B14) 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:09 (B14) 07:42	18:25 16:11	16:13 15:38	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	16:11 16:01	15:38 15:38	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	16:01 16:00	15:38 15:38	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	16:00 16:00	15:38 15:38	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	16:00 16:00	15:38 15:38	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	16:00 16:00	15:38 15:38	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	16:00 16:01	15:38 15:39	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	16:00 16:00	15:38 15:39	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	16:00 16:00	15:38 15:39	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	16:00 16:00	15:38 15:40	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	16:00 16:00	15:38 15:40	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	16:00 16:00	15:38 15:41	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	16:00 16:00	15:38 15:41	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 16:50	16:00 16:00	15:38 15:42	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	08:12 16:48	16:00 16:00	15:38 15:43	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45	16:00 16:00	15:38 15:44	08:51 15:44
29	08:20 16:39	07:11 17:46	06:57 18:45	05:37 20:49	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	16:00 16:00	15:38 15:45	08:51 15:45
30	08:19 16:41	07:09 17:49	06:54 18:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:41	16:00 16:00	15:38 15:46	08:51 15:46
31	08:17 16:43	07:07 17:51	06:52 18:51	05:33 20:53	04:37 21:51	04:30 22:10	05:14 20:17	06:15 20:17	07:17 (B14) 14 07:17 (B14)	08:18 16:38	16:00 16:00	15:38 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216	
Total, worst case				207									
Sun reduction				0.50									
Oper. time red.				0.98									
Wind dir. red.				0.66									
Total reduction				0.32									
Total, real				67				8	52				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež a Muiž a - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (134)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		13:26 (B22)	08:15		13:37 (B22)	07:11		06:49				05:32		04:36			
	15:48	41	14:07 (B22)	16:45	39	14:16 (B22)	17:47		19:53				20:55		21:53			
2	08:50		13:27 (B22)	08:13		13:38 (B22)	07:08		06:46				05:30		04:35			
	15:49	41	14:08 (B22)	16:47	38	14:16 (B22)	17:50		19:55				20:57		21:54			
3	08:50		13:26 (B22)	08:11		13:39 (B22)	07:06		06:43				05:28		04:34			
	15:51	42	14:08 (B22)	16:50	36	14:15 (B22)	17:52		19:57				20:59		21:55			
4	08:50		13:26 (B22)	08:09		13:41 (B22)	07:03		06:41				05:26		04:33			
	15:52	43	14:09 (B22)	16:52	33	14:14 (B22)	17:54		19:59				21:02		21:57			
5	08:49		13:27 (B22)	08:07		13:43 (B22)	07:00		06:38				05:23		04:32			
	15:53	43	14:10 (B22)	16:54	30	14:13 (B22)	17:56		20:01				21:04		21:58			
6	08:49		13:27 (B22)	08:05		13:44 (B22)	06:58		06:35				05:21		04:31			
	15:55	44	14:11 (B22)	16:56	27	14:11 (B22)	17:58		20:03				21:06		21:59			
7	08:48		13:27 (B22)	08:03		13:47 (B22)	06:55		06:33				05:19		04:30			
	15:56	44	14:11 (B22)	16:59	22	14:09 (B22)	18:00		20:05				21:08		22:00			
8	08:47		13:27 (B22)	08:00		13:50 (B22)	06:53		06:30				05:17		04:29			
	15:58	45	14:12 (B22)	17:01	17	14:07 (B22)	18:03		20:07				21:10		22:01			
9	08:47		13:28 (B22)	07:58		13:57 (B22)	06:50		06:27				05:15		04:28			
	15:59	44	14:12 (B22)	17:03	3	14:00 (B22)	18:05		20:10				21:12		22:02			
10	08:46		13:28 (B22)	07:56		06:47	06:25		06:25			06:50 (B4)	05:13		04:28			
	16:01	45	14:13 (B22)	17:05		18:07	20:12	2	06:52 (B4)			21:14	22:03					
11	08:45		13:28 (B22)	07:54		06:45	06:22		06:22			06:48 (B4)	05:10		04:27			
	16:03	46	14:14 (B22)	17:08		18:09	20:14	9	06:57 (B4)			21:16	22:04					
12	08:44		13:28 (B22)	07:52		06:42	06:20		06:20			06:45 (B4)	05:08		04:27			
	16:04	46	14:14 (B22)	17:10		18:11	20:16	13	06:58 (B4)			21:18	22:05					
13	08:43		13:28 (B22)	07:49		06:39	06:17		06:17			06:43 (B4)	05:06		04:26			
	16:06	47	14:15 (B22)	17:12		18:13	20:18	16	06:59 (B4)			21:20	22:06					
14	08:42		13:29 (B22)	07:47		06:37	06:14		06:14			06:40 (B4)	05:04		04:26			
	16:08	46	14:15 (B22)	17:14		18:15	20:20	19	06:59 (B4)			21:22	22:07					
15	08:41		13:28 (B22)	07:45		06:34	06:12		06:12			06:39 (B4)	05:02		04:26			
	16:10	47	14:15 (B22)	17:17		18:17	20:22	21	07:00 (B4)			21:24	22:07					
16	08:40		13:29 (B22)	07:43		06:31	06:09		06:09			06:38 (B4)	05:01		04:25			
	16:12	47	14:16 (B22)	17:19		18:20	20:24	22	07:00 (B4)			21:25	22:08					
17	08:39		13:29 (B22)	07:40		06:29	06:07		06:07			06:38 (B4)	04:59		04:25			
	16:14	47	14:16 (B22)	17:21		18:22	20:26	22	07:00 (B4)			21:27	22:08					
18	08:37		13:29 (B22)	07:38		06:26	06:04		06:04			06:37 (B4)	04:57		04:25			
	16:16	48	14:17 (B22)	17:23		18:24	20:28	22	06:59 (B4)			21:29	22:09					
19	08:36		13:29 (B22)	07:35		06:23	06:02		06:02			06:38 (B4)	04:55		04:25			
	16:18	48	14:17 (B22)	17:25		18:26	20:30	21	06:59 (B4)			21:31	22:09					
20	08:35		13:30 (B22)	07:33		06:21	05:59		05:59			06:37 (B4)	04:53		04:25			
	16:20	48	14:18 (B22)	17:28		18:28	20:32	21	06:58 (B4)			21:33	22:10					
21	08:33		13:30 (B22)	07:31		06:18	05:57		05:57			06:38 (B4)	04:52		04:25			
	16:22	48	14:18 (B22)	17:30		18:30	20:35	20	06:58 (B4)			21:35	22:10					
22	08:32		13:31 (B22)	07:28		06:15	05:54		05:54			06:39 (B4)	04:50		04:25			
	16:24	47	14:18 (B22)	17:32		18:32	20:37	18	06:57 (B4)			21:36	22:10					
23	08:30		13:31 (B22)	07:26		06:13	05:52		05:52			06:40 (B4)	04:48		04:26			
	16:26	47	14:18 (B22)	17:34		18:34	20:39	15	06:55 (B4)			21:38	22:10					
24	08:29		13:31 (B22)	07:23		06:10	05:49		05:49			06:41 (B4)	04:47		04:26			
	16:28	47	14:18 (B22)	17:37		18:36	20:41	12	06:53 (B4)			21:40	22:10					
25	08:27		13:32 (B22)	07:21		06:07	05:47		05:47			06:44 (B4)	04:45		04:26			
	16:30	47	14:19 (B22)	17:39		18:38	20:43	7	06:51 (B4)			21:42	22:10					
26	08:25		13:33 (B22)	07:18		06:05	05:44		05:44			04:44	04:27					
	16:32	46	14:19 (B22)	17:41		18:40	20:45		20:45			21:43	22:10					
27	08:24		13:33 (B22)	07:16		06:02	05:42		05:42			04:42	04:27					
	16:34	46	14:19 (B22)	17:43		18:43	20:47		20:47			21:45	22:10					
28	08:22		13:34 (B22)	07:13		05:59	05:40		05:40			04:41	04:28					
	16:36	45	14:19 (B22)	17:45		18:45	20:49		20:49			21:47	22:10					
29	08:20		13:35 (B22)			06:57	05:37		05:37			04:39	04:28					
	16:39	44	14:19 (B22)			19:47	20:51		20:51			21:48	22:10					
30	08:18		13:36 (B22)			06:54	05:35		05:35			04:38	04:29					
	16:41	42	14:18 (B22)			19:49	20:53		20:53			21:50	22:09					
31	08:17		13:36 (B22)			06:51						04:37						
	16:43	41	14:17 (B22)			19:51						21:51						
Potential sun hours	235			266		366	426		508		529							
Total, worst case	1402			245			260											
Sun reduction	0.13			0.20			0.50											
Oper. time red.	0.98			0.98			0.98											
Wind dir. red.	0.65			0.65			0.66											
Total reduction	0.08			0.13			0.32											
Total, real	119			31			83											

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež a Muiž a - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (134)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	06:47 (B4)	07:17	07:23
	22:09	21:28	20:14	8 06:55 (B4)	18:54	16:36
2	04:31	05:17	06:19	06:49 (B4)	07:19	07:25
	22:08	21:26	20:11	2 06:51 (B4)	18:51	16:34
3	04:32	05:19	06:21		07:21	07:27
	22:08	21:24	20:09		18:48	16:31
4	04:33	05:21	06:23		07:23	07:29
	22:07	21:22	20:06		18:46	16:29
5	04:34	05:23	06:25		07:25	07:31
	22:07	21:19	20:03		18:43	16:27
6	04:35	05:25	06:27		07:27	07:33
	22:06	21:17	20:01		18:40	16:25
7	04:36	05:27	06:29		07:29	07:36
	22:05	21:15	19:58		18:38	16:23
8	04:37	05:29	06:31		07:32	07:38
	22:04	21:13	19:55		18:35	16:21
9	04:38	05:31	06:33		07:34	07:40
	22:03	21:11	19:53		18:32	16:19
10	04:39	05:33	06:35		07:36	07:42
	22:02	21:08	19:50		18:30	16:17
11	04:41	05:35	06:37		07:38	07:44
	22:01	21:06	19:47		18:27	16:15
12	04:42	05:37	06:39		07:40	07:46
	22:00	21:04	19:45		18:25	16:13
13	04:43	05:39	06:41		07:42	07:49
	21:59	21:01	19:42		18:22	16:11
14	04:45	05:41	06:43		07:44	07:51
	21:58	20:59	19:39		18:19	16:09
15	04:46	05:43	06:45		07:46	07:53
	21:57	20:57	19:37		18:17	16:08
16	04:48	05:45	06:47		07:48	07:55
	21:55	20:54	19:34		18:14	16:06
17	04:49	05:47	06:49		07:50	07:57
	21:54	20:52	19:31		18:12	16:04
18	04:51	05:49	06:51		07:52	07:59
	21:52	20:49	8 06:57 (B4)	19:29	18:09	16:02
19	04:52	05:51	06:53		07:54	08:01
	21:51	20:47	12 06:59 (B4)	19:26	18:07	16:01
20	04:54	05:53	06:55		07:57	08:03
	21:49	20:45	16 07:01 (B4)	19:23	18:04	15:59
21	04:56	05:55	06:57		07:59	08:05
	21:48	20:42	18 07:02 (B4)	19:20	18:02	15:58
22	04:57	05:57	06:59		08:01	08:07
	21:46	20:40	20 07:03 (B4)	19:18	17:59	15:56
23	04:59	05:59	07:01		08:03	08:09
	21:45	20:37	21 07:03 (B4)	19:15	17:57	15:55
24	05:01	06:01	07:03		08:05	08:11
	21:43	20:35	21 07:03 (B4)	19:12	17:55	15:53
25	05:03	06:03	07:05		08:07	08:13
	21:41	20:32	22 07:03 (B4)	19:10	16:52	15:52
26	05:04	06:05	07:07		08:09	08:15
	21:39	20:29	22 07:02 (B4)	19:07	16:50	15:51
27	05:06	06:07	07:09		08:11	08:17
	21:37	20:27	22 07:02 (B4)	19:04	16:47	15:49
28	05:08	06:09	07:11		08:13	08:19
	21:36	20:24	21 07:01 (B4)	19:02	16:45	15:48
29	05:10	06:11	07:13		08:15	08:21
	21:34	20:22	19 07:00 (B4)	18:59	16:43	15:47
30	05:12	06:13	07:15		08:17	08:22
	21:32	20:19	16 06:59 (B4)	18:56	16:40	15:46
31	05:14	06:15	07:17		08:19	08:25
	21:30	20:17	13 06:58 (B4)		16:38	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		251	10		1178	1265
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.66	0.66		0.65	0.65
Total reduction		0.32	0.27		0.05	0.04
Total, real		80	3		62	57

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež a Rasas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (102)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	05:00 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež muiža - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (122)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		13:51 (B22)	08:15		13:53 (B22)	07:11		06:49				05:32		04:36			
	15:48	31	14:22 (B22)	16:45	47	14:40 (B22)	17:47		19:53				20:55		21:52			
2	08:50		13:52 (B22)	08:13		13:54 (B22)	07:08		06:46				05:30		04:35			
	15:49	31	14:23 (B22)	16:47	46	14:40 (B22)	17:50		19:55				20:57		21:54			
3	08:50		13:51 (B22)	08:11		13:55 (B22)	07:06		06:43				05:28		04:34			
	15:51	33	14:24 (B22)	16:50	45	14:40 (B22)	17:52		19:57				20:59		21:55			
4	08:50		13:51 (B22)	08:09		13:56 (B22)	07:03		06:41				05:26		04:33			
	15:52	33	14:24 (B22)	16:52	44	14:40 (B22)	17:54		19:59				21:02		21:57			
5	08:49		13:52 (B22)	08:07		13:57 (B22)	07:00		06:38				05:23		04:32			
	15:53	34	14:26 (B22)	16:54	42	14:39 (B22)	17:56		20:01				21:04		21:58			
6	08:49		13:51 (B22)	08:05		13:57 (B22)	06:58		06:35				05:21		04:31			
	15:55	36	14:27 (B22)	16:56	41	14:38 (B22)	17:58		20:03				21:06		21:59			
7	08:48		13:51 (B22)	08:03		13:59 (B22)	06:55		06:33				05:19		04:30			
	15:56	37	14:28 (B22)	16:59	39	14:38 (B22)	18:00		20:05				21:08		22:00			
8	08:47		13:51 (B22)	08:00		14:00 (B22)	06:53		06:30				05:17		04:29			
	15:58	37	14:28 (B22)	17:01	37	14:37 (B22)	18:03		20:07				21:10		22:01			
9	08:47		13:51 (B22)	07:58		14:01 (B22)	06:50		06:27				05:15		04:28			
	15:59	38	14:29 (B22)	17:03	34	14:35 (B22)	18:05		20:10				21:12		22:02			
10	08:46		13:51 (B22)	07:56		14:03 (B22)	06:47		06:25				05:13		04:28			
	16:01	39	14:30 (B22)	17:05	31	14:34 (B22)	18:07		20:12				21:14		22:03			
11	08:45		13:51 (B22)	07:54		14:05 (B22)	06:45		06:22				05:10		04:27			
	16:03	40	14:31 (B22)	17:08	28	14:33 (B22)	18:09		20:14				21:16		22:04			
12	08:44		13:50 (B22)	07:52		14:07 (B22)	06:42		06:20				05:08		04:27			
	16:04	41	14:31 (B22)	17:10	23	14:30 (B22)	18:11		20:16				21:18		22:05			
13	08:43		13:50 (B22)	07:49		14:11 (B22)	06:39		06:17				05:06		04:26			
	16:06	42	14:32 (B22)	17:12	16	14:27 (B22)	18:13		20:18				21:20		22:06			
14	08:42		13:51 (B22)	07:47			06:37		06:14			06:40 (B4)	05:04		04:26			
	16:08	43	14:34 (B22)	17:14			18:15		20:20		9	06:49 (B4)	21:22		22:07			
15	08:41		13:50 (B22)	07:45			06:34		06:12			06:38 (B4)	05:02		04:26			
	16:10	44	14:34 (B22)	17:17			18:17		20:22		13	06:51 (B4)	21:24		22:07			
16	08:40		13:51 (B22)	07:43			06:31		06:09			06:35 (B4)	05:01		04:25			
	16:12	44	14:35 (B22)	17:19			18:20		20:24		17	06:52 (B4)	21:25		22:08			
17	08:39		13:50 (B22)	07:40			06:29		06:07			06:33 (B4)	04:59		04:25			
	16:14	45	14:35 (B22)	17:21			18:22		20:26		20	06:53 (B4)	21:27		22:08			
18	08:37		13:51 (B22)	07:38			06:26		06:04			06:32 (B4)	04:57		04:25			
	16:16	45	14:36 (B22)	17:23			18:24		20:28		21	06:53 (B4)	21:29		22:09			
19	08:36		13:50 (B22)	07:35			06:23		06:02			06:31 (B4)	04:55		04:25			
	16:18	47	14:37 (B22)	17:25			18:26		20:30		22	06:53 (B4)	21:31		22:09			
20	08:35		13:51 (B22)	07:33			06:21		05:59			06:30 (B4)	04:53		04:25			
	16:20	47	14:38 (B22)	17:28			18:28		20:32		23	06:53 (B4)	21:33		22:10			
21	08:33		13:51 (B22)	07:31			06:18		05:57			06:30 (B4)	04:52		04:25			
	16:22	47	14:38 (B22)	17:30			18:30		20:35		23	06:53 (B4)	21:35		22:10			
22	08:32		13:51 (B22)	07:28			06:15		05:54			06:31 (B4)	04:50		04:25			
	16:24	47	14:38 (B22)	17:32			18:32		20:37		22	06:53 (B4)	21:36		22:10			
23	08:30		13:51 (B22)	07:26			06:13		05:52			06:30 (B4)	04:48		04:26			
	16:26	48	14:39 (B22)	17:34			18:34		20:39		22	06:52 (B4)	21:38		22:10			
24	08:29		13:51 (B22)	07:23			06:10		05:49			06:31 (B4)	04:47		04:26			
	16:28	48	14:39 (B22)	17:37			18:36		20:41		21	06:52 (B4)	21:40		22:10			
25	08:27		13:52 (B22)	07:21			06:07		05:47			06:31 (B4)	04:45		04:26			
	16:30	48	14:40 (B22)	17:39			18:38		20:43		20	06:51 (B4)	21:42		22:10			
26	08:25		13:52 (B22)	07:18			06:05		05:44			06:31 (B4)	04:44		04:27			
	16:32	48	14:40 (B22)	17:41			18:40		20:45		18	06:49 (B4)	21:43		22:10			
27	08:24		13:52 (B22)	07:16			06:02		05:42			06:33 (B4)	04:42		04:27			
	16:34	49	14:41 (B22)	17:43			18:43		20:47		15	06:48 (B4)	21:45		22:10			
28	08:22		13:52 (B22)	07:13			05:59		05:40			06:34 (B4)	04:41		04:28			
	16:36	49	14:41 (B22)	17:45			18:45		20:49		13	06:47 (B4)	21:47		22:10			
29	08:20		13:53 (B22)				06:57		05:37			06:37 (B4)	04:39		04:28			
	16:39	48	14:41 (B22)				19:47		20:51		7	06:44 (B4)	21:48		22:10			
30	08:18		13:53 (B22)				06:54		05:35				04:38		04:29			
	16:41	48	14:41 (B22)				19:49		20:53				21:50		22:09			
31	08:17		13:53 (B22)				06:51						04:37					
	16:43	47	14:40 (B22)				19:51						21:51					
Potential sun hours	235			266			366		426				508		529			
Total, worst case	1314			473					286									
Sun reduction	0.13			0.20					0.50									
Oper. time red.	0.98			0.98					0.98									
Wind dir. red.	0.66			0.66					0.65									
Total reduction	0.09			0.13					0.32									
Total, real	114			62					92									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež muiža - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (122)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36 32	13:32 (B22) 14:04 (B22) 40	08:24 15:45 14:13 (B22)
2	04:31 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34 35	13:30 (B22) 14:05 (B22) 39	08:26 15:44 14:13 (B22)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31 38	13:29 (B22) 14:07 (B22) 39	08:27 15:43 14:13 (B22)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29 39	13:28 (B22) 14:07 (B22) 38	08:29 15:42 14:13 (B22)
5	04:34 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27 41	13:27 (B22) 14:08 (B22) 37	08:31 15:42 14:13 (B22)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25 42	13:27 (B22) 14:09 (B22) 36	08:32 15:41 14:13 (B22)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23 43	13:26 (B22) 14:09 (B22) 34	08:34 15:40 14:12 (B22)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21 45	13:26 (B22) 14:11 (B22) 34	08:35 15:40 14:13 (B22)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19 46	13:25 (B22) 14:11 (B22) 33	08:37 15:39 14:12 (B22)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17 47	13:24 (B22) 14:11 (B22) 32	08:38 15:39 14:13 (B22)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15 47	13:25 (B22) 14:12 (B22) 31	08:39 15:38 14:12 (B22)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13 48	13:24 (B22) 14:12 (B22) 30	08:40 15:38 14:13 (B22)
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11 48	13:25 (B22) 14:13 (B22) 30	08:41 15:38 14:13 (B22)
14	04:45 21:58	05:41 20:59	06:43 (B4) 19:39	07:44 18:19	07:51 16:09 49	13:24 (B22) 14:13 (B22) 29	08:43 15:38 14:13 (B22)
15	04:46 21:57	05:43 20:57	06:41 (B4) 19:37	07:46 18:17	07:53 16:08 48	13:24 (B22) 14:12 (B22) 28	08:44 15:38 14:13 (B22)
16	04:48 21:55	05:45 20:54	06:40 (B4) 19:34	07:48 18:14	07:55 16:06 48	13:25 (B22) 14:13 (B22) 27	08:45 15:38 14:13 (B22)
17	04:49 21:54	05:47 20:52	06:38 (B4) 19:31	07:50 18:12	07:57 16:04 48	13:25 (B22) 14:13 (B22) 27	08:45 15:38 14:13 (B22)
18	04:51 21:52	05:49 20:49	06:37 (B4) 19:29	07:52 18:09	07:59 16:02 48	13:25 (B22) 14:13 (B22) 27	08:46 15:38 14:14 (B22)
19	04:52 21:51	05:51 20:47	06:36 (B4) 19:26	07:54 18:07	08:01 16:01 48	13:26 (B22) 14:14 (B22) 26	08:47 15:38 14:13 (B22)
20	04:54 21:49	05:53 20:45	06:36 (B4) 19:23	07:57 18:04	08:03 15:59 47	13:26 (B22) 14:13 (B22) 26	08:48 15:39 14:14 (B22)
21	04:56 21:48	05:55 20:42	06:35 (B4) 19:20	07:59 18:02	08:05 15:58 47	13:26 (B22) 14:13 (B22) 26	08:48 15:39 14:15 (B22)
22	04:57 21:46	05:57 20:40	06:35 (B4) 19:18	08:01 17:59	08:07 15:56 47	13:27 (B22) 14:14 (B22) 26	08:49 15:39 14:15 (B22)
23	04:59 21:45	05:59 20:37	06:35 (B4) 19:15	08:03 17:57	08:09 15:55 47	13:27 (B22) 14:14 (B22) 26	08:49 15:40 14:16 (B22)
24	05:01 21:43	06:01 20:35	06:35 (B4) 19:12	08:05 17:55	08:11 15:53 45	13:28 (B22) 14:13 (B22) 26	08:50 15:40 14:16 (B22)
25	05:03 21:41	06:03 20:32	06:35 (B4) 19:10	08:07 16:52	08:13 15:52 45	13:28 (B22) 14:13 (B22) 26	08:50 15:41 14:16 (B22)
26	05:04 21:39	06:05 20:29	06:35 (B4) 19:07	08:09 16:50	08:15 15:51 44	13:29 (B22) 14:13 (B22) 27	08:51 15:42 14:17 (B22)
27	05:06 21:37	06:07 20:27	06:37 (B4) 19:04	08:12 16:47	08:17 15:49 44	13:30 (B22) 14:14 (B22) 28	08:51 15:43 14:18 (B22)
28	05:08 21:36	06:09 20:24	06:39 (B4) 19:02	08:14 16:45	08:19 15:48 43	13:31 (B22) 14:14 (B22) 27	08:51 15:44 14:18 (B22)
29	05:10 21:34	06:11 20:22	06:41 (B4) 18:59	08:16 16:43	08:21 15:47 42	13:32 (B22) 14:14 (B22) 28	08:51 15:45 14:19 (B22)
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:40	08:22 15:46 42	13:32 (B22) 14:14 (B22) 29	08:51 15:46 14:20 (B22)
31	05:14 21:30	06:15 20:17	07:20 16:38	08:20 14:02 (B22) 29	13:33 (B22) 14:02 (B22)	14:14 (B22) 15:47 29	08:51 15:47 14:21 (B22)
Potential sun hours	529	469	385	324	247	216	
Total, worst case		288		80	1333	941	
Sun reduction		0.50		0.26	0.08	0.07	
Oper. time red.		0.98		0.98	0.98	0.98	
Wind dir. red.		0.65		0.66	0.66	0.66	
Total reduction		0.32		0.17	0.05	0.05	
Total, real		92		13	71	43	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež setas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (165)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	05:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež vidi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (71)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April	May	June
1	08:51		12:20 (B25)	08:15		12:45 (B25)	07:11			06:49	05:32	04:36
	15:48	48	13:08 (B25)	16:45	39	15:50 (B24)	17:47			19:53	20:55	21:52
2	08:50		12:19 (B25)	08:13		12:51 (B25)	07:08			06:46	05:30	04:35
	15:49	49	13:08 (B25)	16:47	33	15:53 (B24)	17:50			19:55	20:57	21:54
3	08:50		12:20 (B25)	08:11		15:26 (B24)	07:06			06:43	05:28	04:34
	15:51	49	13:09 (B25)	16:50	28	15:54 (B24)	17:52			19:57	20:59	21:55
4	08:50		12:20 (B25)	08:09		15:25 (B24)	07:03			06:41	05:26	04:33
	15:52	49	13:09 (B25)	16:52	31	15:56 (B24)	17:54			19:59	21:01	21:56
5	08:49		12:21 (B25)	08:07		15:23 (B24)	07:00			06:38	05:23	04:32
	15:53	48	13:09 (B25)	16:54	33	15:56 (B24)	17:56			20:01	21:04	21:58
6	08:49		12:22 (B25)	08:05		15:23 (B24)	06:58			06:35	05:21	04:31
	15:55	48	13:10 (B25)	16:56	35	15:58 (B24)	17:58			20:03	21:06	21:59
7	08:48		12:22 (B25)	08:03		15:22 (B24)	06:55			06:33	05:19	04:30
	15:56	49	13:11 (B25)	16:59	37	15:59 (B24)	18:00			20:05	21:08	22:00
8	08:47		12:22 (B25)	08:00		15:22 (B24)	06:53			06:30	05:17	04:29
	15:58	49	13:11 (B25)	17:01	38	16:00 (B24)	18:03			20:07	21:10	22:01
9	08:47		12:23 (B25)	07:58		15:21 (B24)	06:50			06:27	05:15	04:29
	15:59	48	13:11 (B25)	17:03	39	16:00 (B24)	18:05			20:10	21:12	22:02
10	08:46		12:23 (B25)	07:56		15:21 (B24)	06:47		17:27 (B14)	06:25	05:13	04:28
	16:01	49	13:12 (B25)	17:05	40	16:01 (B24)	18:07	9	17:36 (B14)	20:12	21:14	22:03
11	08:45		12:24 (B25)	07:54		15:20 (B24)	06:45		17:23 (B14)	06:22	05:10	04:27
	16:03	48	13:12 (B25)	17:08	41	16:01 (B24)	18:09	15	17:38 (B14)	20:14	21:16	22:04
12	08:44		12:24 (B25)	07:52		15:20 (B24)	06:42		17:22 (B14)	06:20	05:08	04:27
	16:04	48	13:12 (B25)	17:10	41	16:01 (B24)	18:11	19	17:41 (B14)	20:16	21:18	22:05
13	08:43		12:24 (B25)	07:49		15:20 (B24)	06:39		17:20 (B14)	06:17	05:06	04:26
	16:06	49	13:13 (B25)	17:12	42	16:02 (B24)	18:13	22	17:42 (B14)	20:18	21:20	22:06
14	08:42		12:25 (B25)	07:47		15:20 (B24)	06:37		17:18 (B14)	06:14	05:04	04:26
	16:08	48	13:13 (B25)	17:14	42	16:02 (B24)	18:15	24	17:42 (B14)	20:20	21:21	22:06
15	08:41		12:25 (B25)	07:45		15:20 (B24)	06:34		17:17 (B14)	06:12	05:03	04:26
	16:10	48	13:13 (B25)	17:17	42	16:02 (B24)	18:17	25	17:42 (B14)	20:22	21:23	22:07
16	08:40		12:26 (B25)	07:42		15:20 (B24)	06:31		17:17 (B14)	06:09	05:01	04:25
	16:12	47	13:13 (B25)	17:19	41	16:01 (B24)	18:20	26	17:43 (B14)	20:24	21:25	22:08
17	08:39		12:26 (B25)	07:40		15:20 (B24)	06:29		17:16 (B14)	06:07	04:59	04:25
	16:14	47	13:13 (B25)	17:21	42	16:02 (B24)	18:22	27	17:43 (B14)	20:26	21:27	22:08
18	08:37		12:27 (B25)	07:38		15:20 (B24)	06:26		17:15 (B14)	06:04	04:57	04:25
	16:16	47	13:14 (B25)	17:23	41	16:01 (B24)	18:24	27	17:42 (B14)	20:28	21:29	22:09
19	08:36		12:28 (B25)	07:35		15:21 (B24)	06:23		17:16 (B14)	06:02	04:55	04:25
	16:18	45	13:13 (B25)	17:25	40	16:01 (B24)	18:26	27	17:43 (B14)	20:30	21:31	22:09
20	08:35		12:28 (B25)	07:33		15:21 (B24)	06:21		17:15 (B14)	05:59	04:53	04:25
	16:20	45	13:13 (B25)	17:28	39	16:00 (B24)	18:28	27	17:42 (B14)	20:32	21:33	22:10
21	08:33		12:29 (B25)	07:31		15:22 (B24)	06:18		17:15 (B14)	05:57	04:52	04:25
	16:22	45	13:14 (B25)	17:30	38	16:00 (B24)	18:30	26	17:41 (B14)	20:35	21:35	22:10
22	08:32		12:30 (B25)	07:28		15:23 (B24)	06:15		17:16 (B14)	05:54	04:50	04:25
	16:24	43	13:13 (B25)	17:32	35	15:58 (B24)	18:32	24	17:40 (B14)	20:37	21:36	22:10
23	08:30		12:31 (B25)	07:26		15:24 (B24)	06:13		17:17 (B14)	05:52	04:48	04:26
	16:26	42	13:13 (B25)	17:34	34	15:58 (B24)	18:34	22	17:39 (B14)	20:39	21:38	22:10
24	08:29		12:31 (B25)	07:23		15:25 (B24)	06:10		17:18 (B14)	05:49	04:47	04:26
	16:28	41	13:12 (B25)	17:37	31	15:56 (B24)	18:36	19	17:37 (B14)	20:41	21:40	22:10
25	08:27		12:32 (B25)	07:21		15:26 (B24)	06:07		17:19 (B14)	05:47	04:45	04:26
	16:30	40	13:12 (B25)	17:39	28	15:54 (B24)	18:38	15	17:34 (B14)	20:43	21:42	22:10
26	08:25		12:34 (B25)	07:18		15:28 (B24)	06:05		17:22 (B14)	05:44	04:44	04:27
	16:32	38	13:12 (B25)	17:41	25	15:53 (B24)	18:40	10	17:32 (B14)	20:45	21:43	22:10
27	08:24		12:36 (B25)	07:16		15:31 (B24)	06:02		05:42	04:42	04:42	04:27
	16:34	35	13:11 (B25)	17:43	19	15:50 (B24)	18:43		20:47	21:45	22:10	7
28	08:22		12:37 (B25)	07:13		15:35 (B24)	05:59		05:40	04:41	04:28	21:06 (B22)
	16:36	33	13:10 (B25)	17:45	11	15:46 (B24)	18:45		20:49	21:46	22:10	5
29	08:20		12:39 (B25)				06:57		05:37	04:40	04:29	
	16:39	30	13:09 (B25)				19:47		20:51	21:48	22:10	
30	08:18		12:40 (B25)				06:54		05:35	04:38	04:29	
	16:41	39	15:45 (B24)				19:49		20:53	21:49	22:09	
31	08:16		12:42 (B25)				06:51			04:37		
	16:43	41	15:48 (B24)				19:51			21:51		
Potential sun hours	235			266			366		426	508	528	
Total, worst case	1385			985			364					135
Sun reduction	0.13			0.20			0.41					0.56
Oper. time red.	0.98			0.98			0.98					0.98
Wind dir. red.	0.64			0.66			0.66					0.61
Total reduction	0.08			0.13			0.26					0.33
Total, real	115			127			96					45

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež vidi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (71)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	18:00 (B14) 20	07:22 16:36 14:50 (B24) 08:24
2	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	18:01 (B14) 17	07:25 16:34 14:51 (B24) 08:26
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	18:03 (B14) 13	07:27 16:32 14:52 (B24) 08:27
4	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:46	18:16 (B14) 37	07:29 16:29 14:52 (B24) 08:29
5	04:34 22:07	05:23 21:19	06:25 20:03	07:25 18:43	36	07:31 16:27 14:52 (B24) 08:31
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	35	07:33 16:25 14:54 (B24) 08:32
7	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	33	07:35 16:23 14:55 (B24) 08:34
8	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	31	07:38 16:21 14:57 (B24) 08:35
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	28	07:40 16:19 12:21 (B25) 08:36
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	33	07:42 16:17 12:23 (B24) 08:38
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	39	07:44 16:15 12:24 (B25) 08:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	41	07:46 16:13 12:25 (B24) 08:40
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	39	07:48 16:11 12:26 (B25) 08:41
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	31	07:51 16:09 12:27 (B24) 08:42
15	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	33	07:53 16:07 12:28 (B25) 08:44
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	35	07:55 16:05 12:29 (B24) 08:46
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	38	07:57 16:03 12:30 (B25) 08:48
18	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:10	39	07:59 16:01 12:31 (B24) 08:50
19	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:08	41	08:01 16:00 12:32 (B25) 08:52
20	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:06	42	08:03 15:58 12:33 (B24) 08:54
21	04:56 21:48	05:55 20:42	06:57 19:20	07:58 18:04	43	08:05 15:56 12:34 (B25) 08:56
22	04:57 21:46	05:57 20:40	06:59 19:18	08:00 18:02	44	08:07 15:54 12:35 (B24) 08:58
23	04:59 21:44	05:59 20:37	07:01 19:15	08:02 18:00	45	08:09 15:52 12:36 (B25) 09:00
24	05:01 21:43	06:01 20:34	07:03 19:12	08:04 17:58	47	08:11 15:50 12:37 (B24) 09:02
25	05:03 21:41	06:03 20:32	07:05 19:10	08:06 17:56	47	08:13 15:48 12:38 (B25) 09:04
26	05:04 21:39	06:05 20:29	07:07 19:07	08:08 17:54	47	08:15 15:46 12:39 (B24) 09:06
27	05:06 21:37	06:07 20:27	07:09 19:04	08:10 17:52	47	08:17 15:44 12:40 (B25) 09:08
28	05:08 21:36	06:09 20:24	07:11 19:02	08:12 17:50	48	08:19 15:42 12:41 (B24) 09:10
29	05:10 21:34	06:11 20:22	07:13 18:59	08:14 17:48	48	08:21 15:40 12:42 (B25) 09:12
30	05:12 21:32	06:13 20:19	07:15 18:56	08:16 17:46	48	08:23 15:38 12:43 (B24) 09:14
31	05:14 21:30	06:15 20:16		08:18 17:44	48	08:25 15:36 12:44 (B25) 09:16
Potential sun hours	529	469	385	324	247	216
Total, worst case			313	693	1199	1491
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.66	0.66	0.65	0.64
Total reduction			0.27	0.17	0.05	0.04
Total, real			86	115	62	65

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Muiž nieki (kad. apz. 56960040061) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (61)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	08:41 (B22) 19:53	06:49 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:23 16:36	08:11 (B22) 15:45
2	08:50 15:49	08:13 16:47	07:08 17:50	08:42 (B22) 19:55	06:46 20:57	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	06:19 18:51	07:25 16:34	08:12 (B22) 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	08:46 (B22) 19:57	06:43 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:20 20:09	06:21 18:48	07:21 16:32	08:14 (B22) 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	08:46 (B22) 19:57	06:41 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:21 20:06	06:23 18:46	07:23 16:29	08:16 (B22) 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	08:44 (B22) 19:58	06:38 21:04	05:23 21:58	04:32 22:07	04:34 21:20	05:23 20:03	06:25 18:43	07:25 16:27	08:17 (B22) 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	08:49 (B22) 19:58	06:35 21:06	05:21 21:59	04:31 22:06	04:35 21:17	05:25 20:01	06:27 18:40	07:27 16:25	08:18 (B22) 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	08:46 (B22) 19:58	06:33 21:08	05:19 22:00	04:30 22:05	04:36 21:15	05:27 19:58	06:29 18:38	07:30 16:23	08:19 (B22) 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	08:44 (B22) 19:59	06:30 21:10	05:17 22:01	04:29 22:04	04:37 21:13	05:29 19:55	06:31 18:35	07:32 16:21	08:20 (B22) 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	08:42 (B22) 19:59	06:28 21:12	05:15 22:02	04:29 22:03	04:38 21:11	05:31 19:53	06:33 18:32	07:34 16:19	08:21 (B22) 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	08:41 (B22) 19:59	06:25 21:14	05:13 22:03	04:28 22:02	04:39 21:08	05:33 19:50	06:35 18:30	07:36 16:17	08:22 (B22) 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	08:40 (B22) 19:59	06:22 21:16	05:11 22:04	04:27 22:01	04:41 21:06	05:35 19:47	06:37 18:27	07:38 16:15	08:23 (B22) 15:38
12	08:44 16:05	07:52 17:10	06:42 18:11	08:38 (B22) 19:59	06:20 21:18	05:08 22:05	04:27 22:00	04:42 21:04	05:37 19:45	06:39 18:25	07:40 16:13	08:24 (B22) 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	08:38 (B22) 19:59	06:17 21:20	05:06 22:06	04:26 22:02	04:43 21:59	05:39 19:42	06:41 18:22	07:42 16:11	08:25 (B22) 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	08:37 (B22) 19:59	06:15 21:22	05:04 22:07	04:26 22:01	04:45 21:58	05:41 19:39	06:43 18:20	07:44 16:09	08:26 (B22) 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	08:36 (B22) 19:59	06:12 21:24	05:03 22:07	04:26 22:01	04:46 21:57	05:43 19:37	06:45 18:17	07:46 16:08	08:27 (B22) 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	08:36 (B22) 19:59	06:09 21:25	05:01 22:08	04:25 22:04	04:48 21:55	05:45 19:34	06:47 18:14	07:48 16:06	08:28 (B22) 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	08:36 (B22) 19:59	06:07 21:27	04:59 22:08	04:25 22:04	04:49 21:54	05:47 19:31	06:49 18:12	07:50 16:04	08:29 (B22) 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	08:35 (B22) 19:59	06:04 21:29	04:57 22:09	04:51 22:05	05:49 21:52	06:51 19:29	07:52 18:09	08:01 16:02	08:30 (B22) 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	08:35 (B22) 19:59	06:02 21:31	04:55 22:09	04:51 22:04	05:51 21:51	06:53 19:26	07:55 18:07	08:03 16:01	08:31 (B22) 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	08:35 (B22) 19:59	05:59 21:33	04:53 22:10	04:54 22:05	05:53 21:49	06:55 19:23	07:57 18:04	08:05 15:59	08:32 (B22) 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	08:35 (B22) 19:59	05:57 21:35	04:52 22:10	04:56 22:04	05:55 21:48	06:57 19:20	07:59 18:02	08:06 15:58	08:33 (B22) 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	08:35 (B22) 19:59	05:54 21:37	04:50 22:10	04:55 22:04	05:57 21:46	06:59 19:18	08:01 17:59	08:07 15:56	08:34 (B22) 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	08:36 (B22) 19:59	05:52 21:38	04:48 22:10	04:59 22:04	05:59 21:45	07:01 19:15	08:03 17:57	08:09 15:55	08:35 (B22) 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	08:36 (B22) 19:59	05:49 21:40	04:47 22:10	04:59 22:04	06:01 21:43	07:03 19:12	08:05 17:55	08:11 15:53	08:36 (B22) 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	08:37 (B22) 19:59	05:47 21:42	04:45 22:10	04:59 22:04	06:03 21:41	07:05 19:10	08:07 17:52	08:13 15:52	08:37 (B22) 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	08:37 (B22) 19:59	05:44 21:43	04:44 22:10	04:59 22:04	06:05 21:39	07:07 19:07	08:09 17:50	08:15 15:51	08:38 (B22) 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	08:38 (B22) 19:59	05:42 21:45	04:42 22:10	04:59 22:04	06:07 21:38	07:09 19:04	08:11 17:46	08:17 15:49	08:39 (B22) 15:43
28	08:22 16:36	07:13 17:45	05:59 18:45	08:40 (B22) 19:59	05:40 21:47	04:41 22:10	04:59 22:04	06:09 21:36	07:11 19:02	08:13 17:45	08:19 15:48	08:40 (B22) 15:44
29	08:20 16:39	07:11 17:47	05:57 19:47	08:41 (B22) 19:59	05:37 21:48	04:40 22:10	04:59 22:04	06:11 21:34	07:13 18:59	08:15 17:43	08:21 15:47	08:41 (B22) 15:45
30	08:18 16:41	07:08 17:49	05:54 19:49	08:42 (B22) 19:59	05:35 21:50	04:38 22:09	04:59 22:04	06:13 21:32	07:15 18:56	08:17 17:41	08:22 15:46	08:42 (B22) 15:46
31	08:17 16:43	07:07 17:49	05:51 19:51	08:43 (B22) 19:59	05:31 21:51	04:37 22:09	04:59 22:04	06:15 21:30	07:20 18:56	08:19 17:40	08:23 15:47	08:43 (B22) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		722								705		
Sun reduction		0.20								0.26		
Oper. time red.		0.98								0.98		
Wind dir. red.		0.61								0.61		
Total reduction		0.12								0.15		
Total, real		87								109		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Muiž nieki (kad. apz. 76860010011) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (191)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1.01 1.91 4.85 7.09 9.29 9.83 8.40 7.53 5.47 2.70 0.68 0.49

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum  
442 466 539 464 488 781 784 938 1,215 1,079 833 556 8,584  
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:50	08:14	15:34 (B3)	07:10	06:48	05:32	04:35	04:29	05:15	06:17	07:17	07:22	08:24
	15:48	16:45	22 15:56 (B3)	17:47	19:53	20:55	21:52	22:09	21:28	20:14	18:53	16:35	15:44
2	08:50	08:12	15:35 (B3)	07:08	06:46	05:30	04:34	04:30	05:17	06:19	07:19	07:24	08:26
	15:49	16:47	21 15:56 (B3)	17:49	19:55	20:57	21:54	22:08	21:25	20:11	18:50	16:33	15:43
3	08:50	08:10	15:35 (B3)	07:05	06:43	05:27	04:33	04:31	05:19	06:21	07:21	07:27	15:12 (B3) 08:27
	15:50	16:49	21 15:56 (B3)	17:51	19:57	20:59	21:55	22:08	21:23	20:08	18:48	16:31	7 15:19 (B3) 15:43
4	08:49	08:08	15:36 (B3)	07:03	06:40	05:25	04:32	04:32	05:21	06:23	07:23	07:29	15:10 (B3) 08:29
	15:51	16:51	20 15:56 (B3)	17:54	19:59	21:01	21:56	22:07	21:21	20:06	18:45	16:29	12 15:22 (B3) 15:42
5	08:49	08:06	15:37 (B3)	07:00	06:38	05:23	04:31	04:33	05:23	06:25	07:25	07:31	15:08 (B3) 08:30
	15:53	16:54	17 15:54 (B3)	17:56	20:01	21:03	21:58	22:06	21:19	20:03	18:42	16:27	15 15:23 (B3) 15:41
6	08:49	08:04	15:38 (B3)	06:57	06:35	05:21	04:30	04:34	05:25	06:27	07:27	07:33	15:07 (B3) 08:32
	15:54	16:56	15 15:53 (B3)	17:58	20:03	21:05	21:59	22:06	21:17	20:00	18:40	16:25	18 15:25 (B3) 15:40
7	08:48	08:02	15:40 (B3)	06:55	06:32	05:18	04:29	04:35	05:27	06:29	07:29	07:35	15:06 (B3) 08:33
	15:56	16:58	12 15:52 (B3)	18:00	20:05	21:07	22:00	22:05	21:15	19:58	18:37	16:22	19 15:25 (B3) 15:40
8	08:47	08:00	15:43 (B3)	06:52	06:30	05:16	04:29	04:36	05:29	06:31	07:31	07:37	15:05 (B3) 08:35
	15:57	17:00	5 15:48 (B3)	18:02	20:07	21:09	22:01	22:04	21:13	19:55	18:35	16:20	21 15:26 (B3) 15:39
9	08:47	07:58		06:50	06:27	05:14	04:28	04:37	05:31	06:33	07:33	07:40	15:05 (B3) 08:36
	15:59	17:03		18:04	20:09	21:11	22:02	22:03	21:10	19:52	18:32	16:18	22 15:27 (B3) 15:39
10	08:46	07:56		06:47	06:24	05:12	04:27	04:39	05:33	06:35	07:35	07:42	15:05 (B3) 08:38
	16:00	17:05		18:06	20:11	21:13	22:03	22:02	21:08	19:50	18:29	16:16	22 15:27 (B3) 15:38
11	08:45	07:54		06:44	06:22	05:10	04:27	04:40	05:35	06:37	07:37	07:44	15:05 (B3) 08:39
	16:02	17:07		18:09	20:13	21:15	22:04	22:01	21:06	19:47	18:27	16:14	23 15:28 (B3) 15:38
12	08:44	07:51		06:42	06:19	05:08	04:26	04:41	05:37	06:39	07:39	07:46	15:05 (B3) 08:40
	16:04	17:09		18:11	20:15	21:17	22:05	22:00	21:03	19:44	18:24	16:13	22 15:27 (B3) 15:38
13	08:43	07:49		06:39	06:17	05:06	04:26	04:43	05:39	06:41	07:42	07:48	15:05 (B3) 08:41
	16:06	17:12		18:13	20:18	21:19	22:06	21:59	21:01	19:42	18:22	16:11	22 15:27 (B3) 15:37
14	08:42	07:47		06:36	06:14	05:04	04:25	04:44	05:41	06:43	07:44	07:50	15:06 (B3) 08:42
	16:07	17:14		18:15	20:20	21:21	22:06	21:58	20:59	19:39	18:19	16:09	22 15:28 (B3) 15:37
15	08:41	07:45		06:34	06:11	05:02	04:25	04:46	05:43	06:45	07:46	07:52	15:06 (B3) 08:43
	16:09	17:16		18:17	20:22	21:23	22:07	21:56	20:56	19:36	18:16	16:07	21 15:27 (B3) 15:37
16	08:40	07:42		06:31	06:09	05:00	04:25	04:47	05:45	06:47	07:48	07:55	15:07 (B3) 08:44
	16:11	17:18		18:19	20:24	21:25	22:08	21:55	20:54	19:34	18:14	16:05	20 15:27 (B3) 15:37
17	08:38	07:40		06:28	06:06	04:58	04:25	04:49	05:47	06:49	07:50	07:57	15:08 (B3) 08:45
	16:13	17:21		18:21	20:26	21:27	22:08	21:54	20:52	19:31	18:11	16:03	18 15:26 (B3) 15:37
18	08:37	07:38		06:26	06:04	04:56	04:24	04:50	05:49	06:51	07:52	07:59	15:08 (B3) 08:46
	16:15	17:23		18:23	20:28	21:29	22:09	21:52	20:49	19:28	18:09	16:02	16 15:24 (B3) 15:37
19	08:36	07:35		06:23	06:01	04:54	04:24	04:52	05:51	06:53	07:54	08:01	15:10 (B3) 08:47
	16:17	17:25		18:25	20:30	21:31	22:09	21:51	20:47	19:25	18:06	16:00	13 15:23 (B3) 15:38
20	08:34	15:39 (B3)	07:33	06:20	05:59	04:53	04:25	04:53	05:53	06:55	07:56	08:03	15:11 (B3) 08:48
	16:19	1 15:40 (B3)	17:27	18:28	20:32	21:33	22:09	21:49	20:44	19:23	18:04	15:59	10 15:21 (B3) 15:38
21	08:33	15:38 (B3)	07:30	06:18	05:56	04:51	04:25	04:55	05:55	06:57	07:58	08:05	15:13 (B3) 08:48
	16:21	5 15:43 (B3)	17:29	18:30	20:34	21:34	22:10	21:48	20:42	19:20	18:01	15:57	6 15:19 (B3) 15:38
22	08:32	15:36 (B3)	07:28	06:15	05:54	04:49	04:25	04:57	05:57	06:59	08:01	08:07	15:15 (B3) 08:49
	16:23	10 15:46 (B3)	17:32	18:32	20:36	21:36	22:10	21:46	20:39	19:17	17:59	15:56	2 15:17 (B3) 15:39
23	08:30	15:35 (B3)	07:25	06:12	05:51	04:48	04:25	04:59	05:59	07:01	08:03	08:09	08:49
	16:25	13 15:48 (B3)	17:34	18:34	20:38	21:38	22:10	21:44	20:37	19:15	17:56	15:54	15:39
24	08:28	15:34 (B3)	07:23	06:10	05:49	04:46	04:25	05:00	06:01	07:03	08:05	08:11	15:39
	16:27	16 15:50 (B3)	17:36	18:36	20:41	21:40	22:10	21:43	20:34	19:12	17:54	15:53	15:40
25	08:27	15:34 (B3)	07:20	06:07	05:46	04:45	04:26	05:02	06:03	07:05	07:07	08:13	15:40
	16:29	18 15:52 (B3)	17:38	18:38	20:43	21:41	22:10	21:41	20:32	19:09	16:52	15:51	15:41
26	08:25	15:33 (B3)	07:18	06:04	05:44	04:43	04:26	05:04	06:05	07:07	07:09	08:15	15:40
	16:32	20 15:53 (B3)	17:40	18:40	20:45	21:43	22:10	21:39	20:29	19:07	16:49	15:50	15:41
27	08:24	15:33 (B3)	07:15	06:02	05:41	04:42	04:27	05:06	06:07	07:09	07:11	08:17	15:41
	16:34	21 15:54 (B3)	17:43	18:42	20:47	21:45	22:10	21:37	20:27	19:04	16:47	15:49	15:42
28	08:22	15:33 (B3)	07:13	05:59	05:39	04:40	04:27	05:08	06:09	07:11	07:13	08:19	15:41
	16:36	22 15:55 (B3)	17:45	18:44	20:49	21:46	22:10	21:35	20:24	19:01	16:45	15:48	15:43
29	08:20	15:33 (B3)		06:56	05:37	04:39	04:28	05:09	06:11	07:13	07:16	08:20	15:41
	16:38	22 15:55 (B3)		19:46	20:51	21:48	22:09	21:33	20:21	18:58	16:42	15:46	15:44
30	08:18	15:33 (B3)		06:54	05:34	04:38	04:29	05:11	06:13	07:15	07:18	08:22	15:41
	16:40	22 15:55 (B3)		19:48	20:53	21:49	22:09	21:32	20:19	18:56	16:40	15:45	15:45
31	08:16	15:34 (B3)		06:51		04:36		05:13	06:15		07:20		15:41
	16:42	22 15:56 (B3)		19:50		21:51		21:30	20:16		16:38		15:46
Potential sun hours	235	266		366	426	508	529	529	469	385	324	247	216
Total, worst case	192	133										331	
Sun reduction	0.13	0.20										0.08	
Oper. time red.	0.98	0.98										0.98	
Wind dir. red.	0.66	0.66										0.66	
Total reduction	0.09	0.13										0.05	
Total, real	16	17										18	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Malkalni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (64)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
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16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
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20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
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22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Masanpurvs - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (192)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:50	08:12 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:46 16:00	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:51 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:05	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
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15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:26 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:47	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
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31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (46)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
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19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	04:57 21:43	05:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 2 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (67)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 4 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (44)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
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9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
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18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
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20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	05:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
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26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 5 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (131)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
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9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 7 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (87)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 8 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (90)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
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21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Nomales - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (160)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
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2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
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12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
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18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
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Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ogu purvs - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (103)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
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7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23	08:34 15:40
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Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ozoli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (1)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
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4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ozolmuiža - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (148)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
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22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
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31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ozolsalina - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (106)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
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23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: OŠ ini (kad. apz. 76860060068001) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (218)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:16	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
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17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:40	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: OŠ ini (kad. apz. 76860060068006) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (223)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:19	08:36 15:39
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11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
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15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
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19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:40	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
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26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
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30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
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Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Paegli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (41)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
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5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
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9	08:47 15:59	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Palejas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (188)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Pilskalni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (32)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
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24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Pludmales - Shadow Receptor: 1.0 × 1.0  
Assumptions for shadow calculations

Azimuth: 0.0° Slope: 90.0° (118)

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:47	07:52 (B18) 16:56 (B22)	06:49 19:53	07:19 (B15) 20:55
2	08:50 15:49	08:13 16:47	07:08 17:50	07:52 (B18) 16:55 (B22)	06:46 19:55	07:17 (B15) 20:57
3	08:50 15:51	08:11 16:50	07:06 17:52	07:52 (B18) 16:54 (B22)	06:43 19:57	07:16 (B15) 20:59
4	08:50 15:52	08:09 16:52	07:03 17:54	07:52 (B18) 16:52 (B22)	06:41 19:59	07:16 (B15) 21:01
5	08:49 15:53	08:07 16:54	07:00 17:56	07:53 (B18) 16:50 (B22)	06:38 20:01	07:15 (B15) 21:04
6	08:49 15:55	08:05 16:56	06:58 17:58	07:55 (B18) 16:47 (B22)	06:35 20:03	07:15 (B15) 21:06
7	08:48 15:56	08:03 16:58	06:55 18:00	07:56 (B18) 08:11 (B18)	06:33 20:05	07:15 (B15) 21:08
8	08:47 15:58	08:00 17:01	06:53 18:03	07:58 (B18) 08:07 (B18)	06:30 20:07	07:14 (B15) 21:10
9	08:47 15:59	07:58 17:03	06:50 18:05		06:27 20:10	07:15 (B15) 21:12
10	08:46 16:01	07:56 17:05	06:47 18:07		06:25 20:12	07:15 (B15) 21:14
11	08:45 16:03	07:54 17:07	06:45 18:09		06:22 20:14	07:16 (B15) 21:16
12	08:44 16:04	07:52 17:10	06:42 18:11		06:20 20:16	07:17 (B15) 21:18
13	08:43 16:06	07:49 17:12	06:39 18:13		06:17 20:18	07:19 (B15) 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15		06:14 20:20	07:20 (B15) 21:22
15	08:41 16:10	07:45 17:16	06:34 18:17		06:12 20:22	05:02 21:23
16	08:40 16:12	07:42 17:19	06:31 18:19		06:09 20:24	05:00 21:25
17	08:39 16:14	07:40 17:21	06:29 18:22		06:07 20:26	04:59 21:27
18	08:37 16:16	07:38 17:23	16:39 (B22) 16:50 (B22)	06:26 18:24	06:04 20:28	04:57 21:29
19	08:36 16:18	07:35 17:25	16:37 (B22) 16:53 (B22)	06:23 18:26	06:02 20:30	04:55 21:31
20	08:35 16:20	07:33 17:28	08:03 (B18) 16:54 (B22)	06:21 18:28	05:59 20:32	04:53 21:33
21	08:33 16:22	07:31 17:30	07:59 (B18) 16:56 (B22)	06:18 18:30	05:57 20:35	04:52 21:35
22	08:32 16:24	07:28 17:32	07:57 (B18) 16:56 (B22)	06:15 18:32	05:54 20:37	04:50 21:36
23	08:30 16:26	07:26 17:34	07:56 (B18) 16:57 (B22)	06:13 18:34	05:52 20:39	04:48 21:38
24	08:29 16:28	07:23 17:36	07:54 (B18) 16:57 (B22)	06:10 18:36	05:49 20:41	04:47 21:40
25	08:27 16:30	07:21 17:39	07:53 (B18) 16:57 (B22)	06:07 18:38	05:47 20:43	04:45 21:42
26	08:25 16:32	07:18 17:41	07:53 (B18) 16:57 (B22)	06:05 18:40	05:44 20:45	04:44 21:43
27	08:24 16:34	07:16 17:43	07:52 (B18) 16:57 (B22)	06:02 18:42	05:42 20:47	04:42 21:45
28	08:22 16:36	07:13 17:45	07:52 (B18) 16:57 (B22)	05:59 18:45	05:39 20:49	04:41 21:46
29	08:20 16:38		06:57 19:47	07:25 (B15) 07:38 (B15)	05:37 20:51	04:39 21:48
30	08:18 16:41		06:54 19:49	07:22 (B15) 07:39 (B15)	05:35 20:53	12 05:49 (B4) 05:35 (B4)
31	08:16 16:43		06:51 19:51	07:20 (B15) 07:40 (B15)	05:33 20:55	16 05:51 (B4) 05:34 (B4)
Potential sun hours	235	266	366	426	508	529
Total, worst case		421	320	328	47	1019
Sun reduction		0.20	0.41	0.50	0.57	0.56
Oper. time red.		0.98	0.98	0.98	0.98	0.98
Wind dir. red.		0.65	0.65	0.66	0.67	0.67
Total reduction		0.13	0.26	0.32	0.37	0.37
Total, real		54	83	105	17	373

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Pludmales - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (118)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November			December		
1	04:30	05:32 (B4)	05:16				06:17	07:15 (B15)	07:17				07:22		08:24			
	22:09	35 06:07 (B4)	21:28				20:14	22 07:37 (B15)	18:53				16:36		15:45			
2	04:31	05:32 (B4)	05:17				06:19	07:14 (B15)	07:19				07:25		08:26			
	22:08	35 06:07 (B4)	21:26				20:11	24 07:38 (B15)	18:51				16:34		15:44			
3	04:32	05:33 (B4)	05:19				06:21	07:13 (B15)	07:21				07:27		08:27			
	22:08	34 06:07 (B4)	21:24				20:09	25 07:38 (B15)	18:48				16:31		15:43			
4	04:32	05:34 (B4)	05:21				06:23	07:12 (B15)	07:23				07:29		08:29			
	22:07	33 06:07 (B4)	21:22				20:06	27 07:39 (B15)	18:45				16:29		15:42			
5	04:33	05:35 (B4)	05:23				06:25	07:11 (B15)	07:25		08:38 (B18)		07:31		08:31			
	22:07	31 06:06 (B4)	21:19				20:03	27 07:38 (B15)	18:43	3	08:41 (B18)		16:27		15:41			
6	04:35	05:35 (B4)	05:25				06:27	07:10 (B15)	07:27		08:33 (B18)		07:33		08:32			
	22:06	31 06:06 (B4)	21:17				20:01	28 07:38 (B15)	18:40	13	08:46 (B18)		16:25		15:41			
7	04:36	05:36 (B4)	05:27				06:29	07:10 (B15)	07:29		08:31 (B18)		07:35		08:34			
	22:05	30 06:06 (B4)	21:15				19:58	27 07:37 (B15)	18:38	16	08:47 (B18)		16:23		15:40			
8	04:37	05:37 (B4)	05:29				06:31	07:10 (B15)	07:31		08:29 (B18)		07:38		08:35			
	22:04	28 06:05 (B4)	21:13				19:55	27 07:37 (B15)	18:35	31	17:24 (B22)		16:21		15:40			
9	04:38	05:38 (B4)	05:31				06:33	07:10 (B15)	07:34		08:27 (B18)		07:40		08:36			
	22:03	26 06:04 (B4)	21:11				19:53	26 07:36 (B15)	18:32	39	17:26 (B22)		16:19		15:39			
10	04:39	05:39 (B4)	05:33				06:35	07:11 (B15)	07:36		08:27 (B18)		07:42		08:38			
	22:02	25 06:04 (B4)	21:08				19:50	24 07:35 (B15)	18:30	44	17:28 (B22)		16:17		15:39			
11	04:41	05:40 (B4)	05:35				06:37	07:11 (B15)	07:38		08:26 (B18)		07:44		08:39			
	22:01	22 06:02 (B4)	21:06				19:47	23 07:34 (B15)	18:27	46	17:28 (B22)		16:15		15:38			
12	04:42	05:41 (B4)	05:37				06:39	07:12 (B15)	07:40		08:25 (B18)		07:46		08:40			
	22:00	20 06:01 (B4)	21:04				19:45	21 07:33 (B15)	18:25	50	17:29 (B22)		16:13		15:38			
13	04:43	05:43 (B4)	05:39				06:41	07:13 (B15)	07:42		08:25 (B18)		07:48		08:41			
	21:59	18 06:01 (B4)	21:01				19:42	18 07:31 (B15)	18:22	50	17:29 (B22)		16:11		15:38			
14	04:45	05:45 (B4)	05:41				06:43	07:15 (B15)	07:44		08:24 (B18)		07:51		08:43			
	21:58	14 05:59 (B4)	20:59				19:39	13 07:28 (B15)	18:19	52	17:29 (B22)		16:09		15:38			
15	04:46	05:47 (B4)	05:43				06:45	07:19 (B15)	07:46		08:24 (B18)		07:53		08:44			
	21:56	8 05:55 (B4)	20:57				19:37	5 07:24 (B15)	18:17	51	17:29 (B22)		16:07		15:38			
16	04:48		05:45				06:47		07:48		08:25 (B18)		07:55		08:45			
	21:55		20:54				19:34		18:14	50	17:29 (B22)		16:06		15:38			
17	04:49		05:47				06:49		07:50		08:25 (B18)		07:57		08:45			
	21:54		20:52				19:31		18:12	49	17:29 (B22)		16:04		15:38			
18	04:51		05:49				06:51		07:52		08:26 (B18)		07:59		08:46			
	21:52		20:49				19:28		18:09	46	17:28 (B22)		16:02		15:38			
19	04:52		05:51				06:53		07:54		08:26 (B18)		08:01		08:47			
	21:51		20:47				19:26		18:07	43	17:27 (B22)		16:01		15:38			
20	04:54		05:53				06:55		07:57		08:29 (B18)		08:03		08:48			
	21:49		20:44				19:23		18:04	38	17:27 (B22)		15:59		15:38			
21	04:56		05:55				06:57		07:59		08:31 (B18)		08:05		08:48			
	21:48		20:42				19:20		18:02	31	17:25 (B22)		15:57		15:39			
22	04:57		05:57				06:59		08:01		17:05 (B22)		08:07		08:49			
	21:46		20:40				19:18		17:59	19	17:24 (B22)		15:56		15:39			
23	04:59		05:59				07:01		08:03		17:08 (B22)		08:09		08:49			
	21:44		20:37				19:15		17:57	15	17:23 (B22)		15:55		15:40			
24	05:01		06:01				07:03		08:05		17:10 (B22)		08:11		08:50			
	21:43		20:34				19:12		17:54	10	17:20 (B22)		15:53		15:40			
25	05:03		06:03				07:05		07:07				08:13		08:50			
	21:41		20:32				19:10		16:52				15:52		15:41			
26	05:04		06:05				07:07		07:09				08:15		08:50			
	21:39		20:29				19:07		16:50				15:51		15:42			
27	05:06		06:07				07:09		07:12				08:17		08:51			
	21:37		20:27				19:04		16:47				15:49		15:43			
28	05:08		06:09				07:11		07:14				08:19		08:51			
	21:36		20:24				19:02		16:45				15:48		15:44			
29	05:10		06:11			07:21 (B15)	07:13		07:16				08:21		08:51			
	21:34		20:22	12	07:33 (B15)	18:59			16:43				15:47		15:44			
30	05:12		06:13		07:18 (B15)	07:15			07:18				08:22		08:51			
	21:32		20:19	17	07:35 (B15)	18:56			16:40				15:46		15:45			
31	05:14		06:15		07:17 (B15)				07:20						08:51			
	21:30		20:16	19	07:36 (B15)				16:38						15:47			
Potential sun hours	529		469			385			324				247		216			
Total, worst case		390		48		337			696									
Sun reduction		0.49		0.50		0.43			0.26									
Oper. time red.		0.98		0.98		0.98			0.98									
Wind dir. red.		0.67		0.66		0.66			0.65									
Total reduction		0.32		0.32		0.27			0.16									
Total, real		126		15		92			114									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Pludmales 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (117)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:47	07:52 (B18) 19:53	06:49 24	07:19 (B15) 20:55
2	08:50 15:49	08:13 16:47	07:08 17:50	07:52 (B18) 19:55	06:46 25	07:18 (B15) 20:57
3	08:50 15:51	08:11 16:50	07:06 17:52	07:53 (B18) 19:57	06:43 26	07:17 (B15) 20:59
4	08:50 15:52	08:09 16:52	07:03 17:54	07:53 (B18) 19:59	06:41 27	07:17 (B15) 21:01
5	08:49 15:53	08:07 16:54	07:00 17:56	07:53 (B18) 20:01	06:38 27	07:16 (B15) 21:04
6	08:49 15:55	08:05 16:56	06:58 17:58	07:55 (B18) 20:03	06:35 27	07:16 (B15) 21:06
7	08:48 15:56	08:03 16:58	06:55 18:00	07:56 (B18) 20:05	06:33 26	07:16 (B15) 21:08
8	08:47 15:58	08:00 17:01	06:53 18:03	07:59 (B18) 20:07	06:30 25	07:16 (B15) 21:10
9	08:47 15:59	07:58 17:03	06:50 18:05	08:06 (B18) 20:10	06:27 25	07:16 (B15) 21:12
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	07:41 (B15) 22	07:17 (B15) 21:14
11	08:45 16:03	07:54 17:07	06:45 18:09	06:22 20:14	07:39 (B15) 20	07:18 (B15) 21:16
12	08:44 16:04	07:52 17:10	06:42 18:11	06:20 20:16	07:19 (B15) 17	05:08 21:18
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	07:21 (B15) 13	05:06 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	07:24 (B15) 6	05:04 21:22
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:25 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:42	04:26 22:10
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 16:36	07:13 17:45	05:59 18:45	06:28 (B15) 20:49	04:41 21:46	04:28 22:10
29	08:20 16:38		06:57 19:47	06:36 (B15) 20:51	04:39 21:48	04:28 22:10
30	08:18 16:41		06:54 19:49	07:25 (B15) 20:53	04:38 21:50	04:29 22:09
31	08:16 16:43		06:51 19:51	07:20 (B15) 20:55	04:37 21:51	04:29 22:09
Potential sun hours	235	266	366	426	508	529
Total, worst case		443	312	310	121	1129
Sun reduction		0.20	0.41	0.50	0.57	0.56
Oper. time red.		0.98	0.98	0.98	0.98	0.98
Wind dir. red.		0.65	0.65	0.66	0.67	0.67
Total reduction		0.13	0.26	0.32	0.37	0.37
Total, real		57	81	99	45	413

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Pludmales 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (117)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November			December		
1	04:30		05:33 (B4)	05:16			06:17		07:17 (B15)	07:17			07:22		08:24			
	22:09	38	06:11 (B4)	21:28			20:14	20	07:37 (B15)	18:53			16:36		15:45			
2	04:31		05:34 (B4)	05:17			06:19		07:16 (B15)	07:19			07:25		08:26			
	22:08	37	06:11 (B4)	21:26			20:11	22	07:38 (B15)	18:51			16:34		15:44			
3	04:32		05:34 (B4)	05:19			06:21		07:14 (B15)	07:21			07:27		08:27			
	22:08	38	06:12 (B4)	21:24			20:09	25	07:39 (B15)	18:48			16:31		15:43			
4	04:32		05:35 (B4)	05:21			06:23		07:14 (B15)	07:23			07:29		08:29			
	22:07	37	06:12 (B4)	21:22			20:06	25	07:39 (B15)	18:45			16:29		15:42			
5	04:33		05:36 (B4)	05:23			06:25		07:12 (B15)	07:25			07:31		08:31			
	22:07	35	06:11 (B4)	21:19			20:03	26	07:38 (B15)	18:43			16:27		15:41			
6	04:35		05:36 (B4)	05:25			06:27		07:11 (B15)	07:27		08:34 (B18)	07:33		08:32			
	22:06	35	06:11 (B4)	21:17			20:01	27	07:38 (B15)	18:40	11	08:45 (B18)	16:25		15:41			
7	04:36		05:37 (B4)	05:27			06:29		07:11 (B15)	07:29		08:31 (B18)	07:35		08:34			
	22:05	34	06:11 (B4)	21:15			19:58	27	07:38 (B15)	18:38	16	08:47 (B18)	16:23		15:40			
8	04:37		05:37 (B4)	05:29			06:31		07:11 (B15)	07:31		08:29 (B18)	07:38		08:35			
	22:04	34	06:11 (B4)	21:13			19:55	27	07:38 (B15)	18:35	27	17:20 (B22)	16:21		15:40			
9	04:38		05:38 (B4)	05:31			06:33		07:11 (B15)	07:34		08:28 (B18)	07:40		08:36			
	22:03	32	06:10 (B4)	21:11			19:53	26	07:37 (B15)	18:32	35	17:23 (B22)	16:19		15:39			
10	04:39		05:39 (B4)	05:33			06:35		07:11 (B15)	07:36		08:27 (B18)	07:42		08:38			
	22:02	30	06:09 (B4)	21:08			19:50	25	07:36 (B15)	18:30	41	17:25 (B22)	16:17		15:39			
11	04:41		05:39 (B4)	05:35			06:37		07:12 (B15)	07:38		08:26 (B18)	07:44		08:39			
	22:01	30	06:09 (B4)	21:06			19:47	23	07:35 (B15)	18:27	45	17:26 (B22)	16:15		15:38			
12	04:42		05:40 (B4)	05:37			06:39		07:12 (B15)	07:40		08:26 (B18)	07:46		08:40			
	22:00	28	06:08 (B4)	21:04			19:45	22	07:34 (B15)	18:25	47	17:27 (B22)	16:13		15:38			
13	04:43		05:42 (B4)	05:39			06:41		07:13 (B15)	07:42		08:25 (B18)	07:48		08:41			
	21:59	26	06:08 (B4)	21:01			19:42	20	07:33 (B15)	18:22	49	17:27 (B22)	16:11		15:38			
14	04:45		05:43 (B4)	05:41			06:43		07:15 (B15)	07:44		08:24 (B18)	07:51		08:43			
	21:58	23	06:06 (B4)	20:59			19:39	15	07:30 (B15)	18:19	51	17:27 (B22)	16:09		15:38			
15	04:46		05:44 (B4)	05:43			06:45		07:17 (B15)	07:46		08:25 (B18)	07:53		08:44			
	21:56	21	06:05 (B4)	20:57			19:37	10	07:27 (B15)	18:17	51	17:28 (B22)	16:07		15:38			
16	04:48		05:46 (B4)	05:45			06:47			07:48		08:25 (B18)	07:55		08:45			
	21:55	18	06:04 (B4)	20:54			19:34			18:14	51	17:28 (B22)	16:06		15:38			
17	04:49		05:48 (B4)	05:47			06:49			07:50		08:25 (B18)	07:57		08:45			
	21:54	14	06:02 (B4)	20:52			19:31			18:12	49	17:27 (B22)	16:04		15:38			
18	04:51		05:52 (B4)	05:49			06:51			07:52		08:26 (B18)	07:59		08:46			
	21:52	7	05:59 (B4)	20:49			19:28			18:09	46	17:26 (B22)	16:02		15:38			
19	04:52			05:51			06:53			07:54		08:26 (B18)	08:01		08:47			
	21:51			20:47			19:26			18:07	44	17:26 (B22)	16:01		15:38			
20	04:54			05:53			06:55			07:57		08:28 (B18)	08:03		08:48			
	21:49			20:45			19:23			18:04	41	17:26 (B22)	15:59		15:38			
21	04:56			05:55			06:57			07:59		08:30 (B18)	08:05		08:48			
	21:48			20:42			19:20			18:02	34	17:24 (B22)	15:57		15:39			
22	04:57			05:57			06:59			08:01		17:03 (B22)	08:07		08:49			
	21:46			20:40			19:18			17:59	20	17:23 (B22)	15:56		15:39			
23	04:59			05:59			07:01			08:03		17:05 (B22)	08:09		08:49			
	21:44			20:37			19:15			17:57	17	17:22 (B22)	15:55		15:40			
24	05:01			06:01			07:03			08:05		17:06 (B22)	08:11		08:50			
	21:43			20:34			19:12			17:54	14	17:20 (B22)	15:53		15:40			
25	05:03			06:03			07:05			07:07		16:09 (B22)	08:13		08:50			
	21:41			20:32			19:10			16:52	7	16:16 (B22)	15:52		15:41			
26	05:04			06:05			07:07			07:09			08:15		08:50			
	21:39			20:29			19:07			16:50			15:51		15:42			
27	05:06			06:07			07:09			07:12			08:17		08:51			
	21:37			20:27			19:04			16:47			15:49		15:43			
28	05:08			06:09			07:11			07:14			08:19		08:51			
	21:36			20:24			19:02			16:45			15:48		15:44			
29	05:10			06:11		07:24 (B15)	07:13			07:16			08:21		08:51			
	21:34			20:22	7	07:31 (B15)	18:59			16:43			15:47		15:44			
30	05:12			06:13		07:21 (B15)	07:15			07:18			08:22		08:51			
	21:32			20:19	13	07:34 (B15)	18:56			16:40			15:46		15:45			
31	05:14			06:15		07:18 (B15)				07:20					08:51			
	21:30			20:16	18	07:36 (B15)				16:38					15:47			
Potential sun hours	529			469			385			324			247		216			
Total, worst case		517			38		340			696								
Sun reduction		0.49			0.50		0.43			0.26								
Oper. time red.		0.98			0.98		0.98			0.98								
Wind dir. red.		0.67			0.66		0.66			0.65								
Total reduction		0.32			0.32		0.27			0.16								
Total, real		167			12		93			114								

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Polakas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (52)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Polakas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (6)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Polakas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (53)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Polakas 3 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (14)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
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26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Pumpuri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (199)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
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15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Pumpuri (kad. apz. 56960040091) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (76)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
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11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:38
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
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30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Pumpuri (kad. apz. 76860060095) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (198)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
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31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Purvini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (20)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:56	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:56	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:25 21:02	04:32 21:57	04:32 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:50 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
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7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
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22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
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31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:17		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Pucsilavas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (193)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
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27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:50	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	08:14 17:45	08:18 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	08:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Rasas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (94)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Rijasvecumi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (206)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:47	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	08:31 15:41
6	08:49 15:54	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:09	04:28 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:13	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:16	05:08 21:17	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:37
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:06	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:16	07:53 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:44 15:37
17	08:39 16:13	07:40 17:21	06:28 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:03	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:24 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:25	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:20 18:28	05:59 20:32	04:53 21:33	04:24 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:55	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:56	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:43	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:40	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:50 15:41
27	08:24 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:07 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:21	07:13 18:58	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:28 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Robež nieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (220)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:49 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:13 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	07:51 17:10	06:42 18:11	06:20 20:16	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:26 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:58	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:57 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:18 15:48	08:50 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Rudzati - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (139)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	07:14 (B14) 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	07:04 (B14) 18:54	07:17 16:36	07:23 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:11 (B14) 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	07:03 (B14) 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	07:09 (B14) 21:00	05:28 21:55	04:32 22:08	04:30 21:24	05:20 20:09	07:02 (B14) 18:48	07:21 16:32	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:06 (B14) 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:22 20:06	07:02 (B14) 18:46	07:23 16:30	07:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:05 (B14) 21:04	05:24 21:58	04:32 22:07	04:34 21:20	05:24 20:04	07:01 (B14) 18:43	07:26 16:27	07:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	07:05 (B14) 21:06	05:21 21:59	04:31 22:06	04:35 21:17	05:26 20:01	07:01 (B14) 18:40	07:28 16:25	07:33 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	07:04 (B14) 21:08	05:19 22:00	04:30 22:05	05:27 21:15	06:29 19:58	07:00 (B14) 18:38	07:30 16:23	07:36 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:05 (B14) 21:10	05:17 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:01 (B14) 18:35	07:32 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	07:04 (B14) 21:12	05:15 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:02 (B14) 18:33	07:34 16:19	07:40 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	07:04 (B14) 21:14	05:13 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:04 (B14) 18:30	07:36 16:17	07:42 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:05 (B14) 21:16	05:11 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:06 (B14) 18:27	07:38 16:15	07:44 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	07:05 (B14) 21:18	05:09 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:08 (B14) 18:25	07:40 16:13	07:46 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:06 (B14) 21:20	05:07 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:16 (B14) 18:22	07:42 16:11	07:49 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	07:23 (B14) 21:22	05:05 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	07:21 (B14) 21:24	05:03 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	07:18 (B14) 21:25	05:01 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	05:01 21:27	04:59 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	05:01 21:29	04:57 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	05:01 21:31	04:55 22:09	04:51 21:53	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	05:01 21:33	04:54 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	05:01 21:35	04:52 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	05:01 21:37	04:50 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	05:01 21:38	04:49 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	05:01 21:40	04:47 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	05:01 21:42	04:45 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	05:01 21:43	04:44 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	05:01 21:45	04:42 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	05:01 21:47	04:41 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:11 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 18:47	05:37 20:51	05:01 21:48	04:40 22:10	05:10 21:34	06:11 20:22	8 07:19 (B14) 18:59	07:08 (B14) 17:15	07:16 16:43	08:51 15:45
30	08:19 16:41	07:09 17:49	05:54 18:49	05:35 20:53	05:01 21:50	04:38 22:09	05:12 21:32	06:13 20:19	07:06 (B14) 18:56	07:23 (B14) 17:15	07:18 16:41	08:51 15:46
31	08:17 16:43	07:07 19:51	05:52 19:51	07:17 (B14) 20:53	07:24 (B14) 21:51	04:37 21:30	05:14 20:17	06:15 19 07:24 (B14)	07:05 (B14) 18:56	07:20 16:38	07:24 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case			7	289				58	243			
Sun reduction			0.41	0.50				0.50	0.43			
Oper. time red.			0.98	0.98				0.98	0.98			
Wind dir. red.			0.66	0.66				0.66	0.66			
Total reduction			0.27	0.32				0.32	0.28			
Total, real			2	93				19	67			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Raceni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (184)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March	April	May	June
1	08:51		13:46 (B22)	08:15		13:57 (B22)	07:11	06:49	05:32	04:36
	15:48	36	14:22 (B22)	16:45	34	14:31 (B22)	17:47	19:53	20:55	21:53
2	08:50		13:46 (B22)	08:13		13:58 (B22)	07:08	06:46	05:30	04:35
	15:49	37	14:23 (B22)	16:47	32	14:30 (B22)	17:50	19:55	20:57	21:54
3	08:50		13:46 (B22)	08:11		14:00 (B22)	07:06	06:43	05:28	04:34
	15:51	37	14:23 (B22)	16:50	29	14:29 (B22)	17:52	19:57	20:59	21:55
4	08:50		13:46 (B22)	08:09		14:02 (B22)	07:03	06:41	05:26	04:33
	15:52	38	14:24 (B22)	16:52	26	14:28 (B22)	17:54	19:59	21:02	21:57
5	08:49		13:47 (B22)	08:07		14:04 (B22)	07:00	06:38	05:23	04:32
	15:53	38	14:25 (B22)	16:54	23	14:27 (B22)	17:56	20:01	21:04	21:58
6	08:49		13:47 (B22)	08:05		14:06 (B22)	06:58	06:35	05:21	04:31
	15:55	38	14:25 (B22)	16:56	18	14:24 (B22)	17:58	20:03	21:06	21:59
7	08:48		13:47 (B22)	08:03		14:11 (B22)	06:55	06:33	05:19	04:30
	15:56	39	14:26 (B22)	16:59	9	14:20 (B22)	18:00	20:05	21:08	22:00
8	08:47		13:47 (B22)	08:00			06:53	06:30	05:17	04:29
	15:58	40	14:27 (B22)	17:01			18:03	20:07	21:10	22:01
9	08:47		13:47 (B22)	07:58			06:50	06:27	06:53 (B4)	05:15
	15:59	40	14:27 (B22)	17:03			18:05	20:10	8 07:01 (B4)	21:12
10	08:46		13:47 (B22)	07:56			06:47	06:25	06:50 (B4)	05:13
	16:01	41	14:28 (B22)	17:05			18:07	20:12	13 07:03 (B4)	21:14
11	08:45		13:48 (B22)	07:54			06:45	06:22	06:48 (B4)	05:10
	16:03	41	14:29 (B22)	17:08			18:09	20:14	17 07:05 (B4)	21:16
12	08:44		13:47 (B22)	07:52			06:42	06:20	06:45 (B4)	05:08
	16:04	42	14:29 (B22)	17:10			18:11	20:16	20 07:05 (B4)	21:18
13	08:43		13:47 (B22)	07:49			06:39	06:17	06:45 (B4)	05:06
	16:06	43	14:30 (B22)	17:12			18:13	20:18	21 07:06 (B4)	21:20
14	08:42		13:48 (B22)	07:47			06:37	06:14	06:44 (B4)	05:04
	16:08	42	14:30 (B22)	17:14			18:15	20:20	22 07:06 (B4)	21:22
15	08:41		13:48 (B22)	07:45			06:34	06:12	06:43 (B4)	05:02
	16:10	42	14:30 (B22)	17:17			18:17	20:22	23 07:06 (B4)	21:24
16	08:40		13:48 (B22)	07:43			06:31	06:09	06:43 (B4)	05:01
	16:12	43	14:31 (B22)	17:19			18:20	20:24	23 07:06 (B4)	21:25
17	08:39		13:48 (B22)	07:40			06:29	06:07	06:43 (B4)	04:59
	16:14	43	14:31 (B22)	17:21			18:22	20:26	23 07:06 (B4)	21:27
18	08:37		13:49 (B22)	07:38			06:26	06:04	06:42 (B4)	04:57
	16:16	43	14:32 (B22)	17:23			18:24	20:28	23 07:05 (B4)	21:29
19	08:36		13:49 (B22)	07:35			06:23	06:02	06:43 (B4)	04:55
	16:18	43	14:32 (B22)	17:25			18:26	20:30	22 07:05 (B4)	21:31
20	08:35		13:50 (B22)	07:33			06:21	05:59	06:43 (B4)	04:53
	16:20	43	14:33 (B22)	17:28			18:28	20:32	20 07:03 (B4)	21:33
21	08:33		13:50 (B22)	07:31			06:18	05:57	06:44 (B4)	04:52
	16:22	43	14:33 (B22)	17:30			18:30	20:35	18 07:02 (B4)	21:35
22	08:32		13:50 (B22)	07:28			06:15	05:54	06:45 (B4)	04:50
	16:24	43	14:33 (B22)	17:32			18:32	20:37	16 07:01 (B4)	21:36
23	08:30		13:50 (B22)	07:26			06:13	05:52	06:46 (B4)	04:48
	16:26	43	14:33 (B22)	17:34			18:34	20:39	13 06:59 (B4)	21:38
24	08:29		13:51 (B22)	07:23			06:10	05:49	06:48 (B4)	04:47
	16:28	42	14:33 (B22)	17:37			18:36	20:41	8 06:56 (B4)	21:40
25	08:27		13:52 (B22)	07:21			06:07	05:47		04:45
	16:30	42	14:34 (B22)	17:39			18:38	20:43		21:42
26	08:25		13:52 (B22)	07:18			06:05	05:44		04:44
	16:32	42	14:34 (B22)	17:41			18:40	20:45		21:43
27	08:24		13:53 (B22)	07:16			06:02	05:42		04:42
	16:34	41	14:34 (B22)	17:43			18:43	20:47		21:45
28	08:22		13:54 (B22)	07:13			05:59	05:39		04:41
	16:36	39	14:33 (B22)	17:45			18:45	20:49		21:47
29	08:20		13:55 (B22)				06:57	05:37		04:39
	16:39	38	14:33 (B22)				19:47	20:51		21:48
30	08:18		13:55 (B22)				06:54	05:35		04:38
	16:41	38	14:33 (B22)				19:49	20:53		21:50
31	08:17		13:56 (B22)				06:51			04:37
	16:43	35	14:31 (B22)				19:51			21:51
Potential sun hours	235			266			366	426	508	529
Total, worst case	1255			171				290		
Sun reduction	0.13			0.20				0.50		
Oper. time red.	0.98			0.98				0.98		
Wind dir. red.	0.66			0.66				0.66		
Total reduction	0.09			0.13				0.32		
Total, real	108			22				93		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Raceni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (184)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	06:47 (B4)	07:17	07:23
	22:09	21:28	20:14	17 07:04 (B4)	18:54	16:36
2	04:31	05:17	06:19	06:49 (B4)	07:19	07:25
	22:08	21:26	20:11	13 07:02 (B4)	18:51	16:34
3	04:32	05:19	06:21	06:51 (B4)	07:21	07:27
	22:08	21:24	20:09	8 06:59 (B4)	18:48	16:31
4	04:33	05:21	06:23		07:23	07:29
	22:07	21:22	20:06		18:46	16:29
5	04:34	05:23	06:25		07:25	07:31
	22:07	21:19	20:03		18:43	16:27
6	04:35	05:25	06:27		07:27	07:33
	22:06	21:17	20:01		18:40	16:25
7	04:36	05:27	06:29		07:29	07:36
	22:05	21:15	19:58		18:38	16:23
8	04:37	05:29	06:31		07:32	07:38
	22:04	21:13	19:55		18:35	16:21
9	04:38	05:31	06:33		07:34	07:40
	22:03	21:11	19:53		18:32	16:19
10	04:39	05:33	06:35		07:36	07:42
	22:02	21:08	19:50		18:30	16:17
11	04:41	05:35	06:37		07:38	07:44
	22:01	21:06	19:47		18:27	16:15
12	04:42	05:37	06:39		07:40	07:46
	22:00	21:04	19:45		18:25	16:13
13	04:43	05:39	06:41		07:42	07:49
	21:59	21:01	19:42		18:22	16:11
14	04:45	05:41	06:43		07:44	07:51
	21:58	20:59	19:39		18:19	16:09
15	04:46	05:43	06:45		07:46	07:53
	21:57	20:57	19:37		18:17	16:08
16	04:48	05:45	06:47		07:48	07:55
	21:55	20:54	19:34		18:14	16:06
17	04:49	05:47	06:49		07:50	07:57
	21:54	20:52	19:31		18:12	16:04
18	04:51	05:49	06:51		07:52	07:59
	21:52	20:49	19:29		18:09	16:02
19	04:52	05:51	06:53		07:54	08:01
	21:51	20:47	19:26		18:07	16:01
20	04:54	05:53	06:55		07:57	08:03
	21:49	20:45	19:23		18:04	15:59
21	04:56	05:55	06:57		07:59	08:05
	21:48	20:42	19:20		18:02	15:58
22	04:57	05:57	06:59		08:01	08:07
	21:46	20:40	19:18		17:59	15:56
23	04:59	05:59	07:01		08:03	08:09
	21:45	20:37	19:15		17:57	15:55
24	05:01	06:01	07:03		08:05	08:11
	21:43	20:35	19:12		17:55	15:53
25	05:03	06:03	07:05		08:07	08:13
	21:41	20:32	19:10		16:52	15:52
26	05:04	06:05	07:07		08:09	08:15
	21:39	20:29	19:07		16:50	15:51
27	05:06	06:07	07:09		08:11	08:17
	21:37	20:27	19:04		16:47	15:49
28	05:08	06:09	07:11		08:13	08:19
	21:36	20:24	19:02		16:45	15:48
29	05:10	06:11	07:13		08:15	08:21
	21:34	20:22	18:59		16:43	15:47
30	05:12	06:13	07:15		08:17	08:22
	21:32	20:19	18:56		16:40	15:46
31	05:14	06:15			08:19	08:25
	21:30	20:17			16:38	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		260	38		1010	1115
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.66	0.66		0.66	0.66
Total reduction		0.32	0.28		0.05	0.05
Total, real		83	10		54	51

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ruki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (177)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:26 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Salvija - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (56)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:04	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	04:57 21:43	05:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Sarkani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (179)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:54 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Sarmas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (154)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Saulkrasti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (112)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	09:00 (B22) 17:48	07:11 19:53	06:49 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:39 (B22) 15:45
2	08:51 15:49	08:13 16:47	09:01 (B22) 17:50	07:08 19:55	06:46 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	9 08:48 (B22) 15:44
3	08:50 15:51	08:11 16:50	09:02 (B22) 17:52	07:06 19:57	06:43 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	14 08:50 (B22) 15:43
4	08:50 15:52	08:09 16:52	09:02 (B22) 17:54	07:03 19:59	06:41 21:02	04:33 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	17 08:52 (B22) 15:42
5	08:49 15:53	08:07 16:54	09:03 (B22) 17:56	07:01 19:59	06:38 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	19 08:53 (B22) 15:42
6	08:49 15:55	08:05 16:56	09:03 (B22) 17:58	06:58 20:03	06:35 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	21 08:55 (B22) 15:41
7	08:48 15:56	08:03 16:59	09:04 (B22) 18:01	06:55 20:06	06:33 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	22 08:55 (B22) 15:40
8	08:48 15:58	08:01 17:01	09:06 (B22) 18:03	06:53 20:08	06:30 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	23 08:55 (B22) 15:40
9	08:47 15:59	07:58 17:03	09:07 (B22) 18:05	06:50 20:10	06:28 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	24 08:56 (B22) 15:39
10	08:46 16:01	07:56 17:05	09:11 (B22) 18:07	06:47 20:12	06:25 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	25 08:57 (B22) 15:39
11	08:45 16:03	07:54 17:08	09:18 (B22) 18:09	06:45 20:14	06:22 21:16	04:27 22:03	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	26 08:57 (B22) 15:38
12	08:44 16:05	07:52 17:10	09:19 (B22) 18:13	06:42 20:16	06:20 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	27 08:57 (B22) 15:38
13	08:43 16:06	07:50 17:12	09:20 (B22) 18:15	06:40 20:18	06:17 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	28 08:57 (B22) 15:38
14	08:42 16:08	07:47 17:14	09:21 (B22) 18:16	06:37 20:20	06:15 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	29 08:57 (B22) 15:38
15	08:41 16:10	07:45 17:17	09:22 (B22) 18:18	06:34 20:22	06:12 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	30 08:56 (B22) 15:38
16	08:40 16:12	07:43 17:19	09:23 (B22) 18:19	06:32 20:24	06:09 21:26	04:25 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	31 08:56 (B22) 15:38
17	08:39 16:14	07:40 17:21	09:24 (B22) 18:20	06:29 20:26	06:07 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:56 (B22) 15:38
18	08:38 16:16	07:38 17:23	09:25 (B22) 18:21	06:26 20:28	06:04 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:56 (B22) 15:38
19	08:36 16:18	07:36 17:26	09:26 (B22) 18:22	06:24 20:31	06:02 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:56 (B22) 15:38
20	08:35 16:20	07:33 17:28	09:27 (B22) 18:23	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:56 (B22) 15:39
21	08:33 16:22	07:31 17:30	09:28 (B22) 18:24	06:18 20:35	05:57 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:56 (B22) 15:39
22	08:32 16:24	07:28 17:32	09:29 (B22) 18:25	06:16 20:37	05:54 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:56 (B22) 15:39
23	08:30 16:26	07:26 17:34	09:30 (B22) 18:26	06:13 20:39	05:52 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:56 (B22) 15:40
24	08:29 16:28	07:23 17:37	09:31 (B22) 18:27	06:10 20:41	05:49 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:56 (B22) 15:41
25	08:27 16:30	07:21 17:39	09:32 (B22) 18:28	06:08 20:43	05:47 21:42	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:56 (B22) 15:41
26	08:26 16:32	07:18 17:41	09:33 (B22) 18:29	06:05 20:45	05:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:56 (B22) 15:42
27	08:24 16:34	07:16 17:43	09:34 (B22) 18:30	06:02 20:47	05:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:49	08:56 (B22) 15:43
28	08:22 16:36	07:13 17:45	09:35 (B22) 18:31	05:59 20:49	05:40 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:19 15:48	08:56 (B22) 15:44
29	08:20 16:39	07:09 17:48	09:36 (B22) 18:32	05:57 20:51	05:37 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 15:47	08:56 (B22) 15:45
30	08:19 16:41	07:07 17:50	09:37 (B22) 18:33	05:54 20:53	05:35 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:22 15:46	08:56 (B22) 15:46
31	08:17 16:43	07:05 17:52	09:38 (B22) 18:34	05:51 20:55	05:32 21:51	04:30 22:10	05:14 21:30	06:15 20:17	07:17 18:38	08:19 17:38	08:24 15:47	08:56 (B22) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	214	195									411	
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.98	0.98									0.98	
Wind dir. red.	0.59	0.59									0.59	
Total reduction	0.08	0.12									0.05	
Total, real	16	23									19	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Saulites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (136)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48		06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14		07:17 18:54	28	07:58 (B14) 08:26 (B14)	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50		06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11		07:19 18:51	28	07:58 (B14) 08:26 (B14)	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	9	07:32 (B14) 07:41 (B14)	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	28	07:57 (B14) 08:25 (B14)	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	14	07:29 (B14) 07:43 (B14)	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	28	07:57 (B14) 08:25 (B14)	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	18	07:26 (B14) 07:44 (B14)	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:25 18:43	27	07:57 (B14) 08:24 (B14)	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	22	07:24 (B14) 07:46 (B14)	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	26	07:57 (B14) 08:23 (B14)	07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	24	07:22 (B14) 07:46 (B14)	06:33 20:06	05:19 21:08	04:30 22:00	05:27 22:05	06:29 21:15	07:30 19:58	07:30 18:38	24	07:58 (B14) 08:22 (B14)	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	26	07:20 (B14) 07:46 (B14)	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	20	08:00 (B14) 08:20 (B14)	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	27	07:20 (B14) 07:47 (B14)	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	16	08:03 (B14) 08:19 (B14)	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	27	07:19 (B14) 07:47 (B14)	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	12	08:05 (B14) 08:17 (B14)	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	28	07:19 (B14) 07:47 (B14)	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	6	08:07 (B14) 08:13 (B14)	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	28	07:19 (B14) 07:46 (B14)	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25			07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	28	07:19 (B14) 07:46 (B14)	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22			07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	26	07:19 (B14) 07:45 (B14)	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20			07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	25	07:20 (B14) 07:45 (B14)	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17			07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	23	07:20 (B14) 07:43 (B14)	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15			07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	20	07:21 (B14) 07:41 (B14)	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12			07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	17	07:22 (B14) 07:39 (B14)	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09			07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	11	07:25 (B14) 07:36 (B14)	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07			08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28		05:59 20:33	04:54 21:33	04:25 22:10	04:54 22:10	05:53 20:45	06:55 19:23	07:57 18:04	07:57 18:04			08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30		05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	07:59 18:02			08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32		05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	07:59 18:00	07:59 18:00			08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34		05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:03 17:57			08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:05 17:55	9	08:10 (B14) 08:19 (B14)	08:05 17:55	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 (B14) 16:52	08:07 (B14) 16:52	15	08:22 (B14)	07:07 16:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41		05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:04 (B14) 16:50	08:04 (B14) 16:50	19	08:23 (B14)	07:10 16:50	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:03 (B14) 16:48	08:03 (B14) 16:48	22	08:25 (B14)	07:12 16:48	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45		05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:01 (B14) 16:45	08:01 (B14) 16:45	24	08:26 (B14)	07:14 16:45	08:51 15:44
29	08:20 16:39		06:57 19:47		05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:00 (B14) 16:43	08:00 (B14) 16:43	26	08:27 (B14)	07:16 16:43	08:51 15:45
30	08:19 16:41		06:54 19:49		05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:59 (B14) 16:41	07:59 (B14) 16:41	27	08:28 (B14)	07:18 16:41	08:51 15:46
31	08:17 16:43		06:52 19:51			04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38	07:20 16:38			08:22 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	529	529	469	385		324		247	216	
Total, worst case				373							142		243			
Sun reduction				0.41							0.43		0.26			
Oper. time red.				0.98							0.98		0.98			
Wind dir. red.				0.62							0.62		0.62			
Total reduction				0.25							0.26		0.16			
Total, real				93							37		38			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Seglini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (79)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48		06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14		07:17 18:54	27	07:51 (B14) 08:18 (B14)	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50		06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11		07:19 18:51	26	07:51 (B14) 08:17 (B14)	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52		06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09		07:21 18:48	25	07:51 (B14) 08:16 (B14)	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54		06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06		07:23 18:46	23	07:52 (B14) 08:15 (B14)	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56		06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04		07:25 18:43	19	07:54 (B14) 08:13 (B14)	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	8	07:24 (B14) 07:32 (B14)	06:36 20:03	05:21 21:06	04:35 21:59	05:25 21:17	06:27 20:01		07:28 18:40	15	07:56 (B14) 08:11 (B14)	07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	13	07:21 (B14) 07:34 (B14)	06:33 20:06	05:19 21:08	04:30 22:00	05:27 21:15	06:29 19:58		07:30 18:38	11	07:58 (B14) 08:09 (B14)	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	17	07:18 (B14) 07:35 (B14)	06:30 20:08	05:17 21:10	04:29 22:01	05:29 21:13	06:31 19:56		07:32 18:35	5	08:00 (B14) 08:05 (B14)	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	21	07:16 (B14) 07:37 (B14)	06:28 20:10	05:15 21:12	04:29 22:02	05:31 21:11	06:33 19:53		07:34 18:33			07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	24	07:13 (B14) 07:37 (B14)	06:25 20:12	05:13 21:14	04:28 22:03	05:33 21:08	06:35 19:50		07:36 18:30			07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	26	07:12 (B14) 07:38 (B14)	06:22 20:14	05:11 21:16	04:27 22:02	05:35 21:06	06:37 19:48		07:38 18:27			07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	26	07:12 (B14) 07:38 (B14)	06:20 20:16	05:09 21:18	04:27 22:05	05:37 21:04	06:39 19:45		07:40 18:25			07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	27	07:11 (B14) 07:38 (B14)	06:17 20:18	05:07 21:20	04:27 22:06	05:39 21:02	06:41 19:42		07:42 18:22			07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	27	07:11 (B14) 07:38 (B14)	06:15 20:20	05:05 21:22	04:26 22:07	05:41 21:05	06:43 19:39		07:44 18:20			07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	27	07:11 (B14) 07:38 (B14)	06:12 20:22	05:03 21:24	04:26 22:07	05:43 21:07	06:45 19:37		07:46 18:17			07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	26	07:11 (B14) 07:37 (B14)	06:09 20:24	05:01 21:26	04:26 22:08	05:45 21:05	06:47 19:34		07:48 18:15			07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	25	07:11 (B14) 07:36 (B14)	06:07 20:26	04:59 21:27	04:25 22:08	05:47 21:02	06:49 19:31		07:50 18:12			07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	23	07:11 (B14) 07:34 (B14)	06:04 20:28	04:57 21:29	04:25 22:09	05:49 21:05	06:51 19:29		07:53 18:09			07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	22	07:12 (B14) 07:34 (B14)	06:02 20:31	04:55 21:31	04:25 22:09	05:51 21:05	06:53 19:26		07:55 18:07			08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	19	07:13 (B14) 07:32 (B14)	05:59 20:33	04:54 21:33	04:25 22:10	05:53 21:49	06:55 19:23		07:57 18:04			08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	14	07:15 (B14) 07:29 (B14)	05:57 20:35	04:52 21:35	04:25 22:10	05:55 21:48	06:57 19:21	08:06 (B14)	07:59 18:02			08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	8	07:18 (B14) 07:26 (B14)	05:54 20:37	04:50 21:37	04:26 22:10	05:57 21:46	06:59 19:18	08:01 (B14)	08:01 18:00			08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34		05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	07:58 (B14)	08:03 17:57			08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	07:56 (B14)	08:05 17:55			08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:55 (B14)	07:07 16:52			08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41		05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:54 (B14)	07:10 16:50			08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:53 (B14)	07:12 16:48			08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45		05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:52 (B14)	07:14 16:45			08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47		05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:51 (B14)	07:16 16:43			08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49		05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:51 (B14)	07:18 16:41			08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51			04:37 21:51		05:14 21:30	06:15 20:17			07:20 16:38			08:24 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	528	529	469	385		324		247	216	
Total, worst case				353						209		151				
Sun reduction				0.41						0.43		0.26				
Oper. time red.				0.98						0.98		0.98				
Wind dir. red.				0.62						0.62		0.62				
Total reduction				0.25						0.26		0.16				
Total, real				88						54		24				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Senlici - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (140)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48		06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14		07:17 18:54	12	07:46 (B14) 07:58 (B14)	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50		06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11		07:19 18:51			07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52		06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09		07:21 18:48			07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54		06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06		07:23 18:46			07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56		06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04		07:25 18:43			07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58		06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01		07:28 18:40			07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01		06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58		07:30 18:38			07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03		06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56		07:32 18:35			07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05		06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53		07:34 18:33			07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07		06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50		07:36 18:30			07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09		06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47		07:38 18:27			07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11		06:20 07:17 (B14)	05:09 20:16	04:27 21:18	04:42 22:05	05:37 21:04	06:39 19:45		07:40 18:25			07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	9	07:05 (B14) 07:20 (B14)	06:17 20:18	05:07 21:20	04:27 22:06	05:39 21:02	06:41 19:42	7	07:54 (B14) 08:01 (B14)			07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	15	07:02 (B14) 07:21 (B14)	06:15 20:20	05:05 21:22	04:26 22:07	05:41 21:58	06:43 20:39	14	07:50 (B14) 08:04 (B14)			07:44 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	19	07:00 (B14) 07:23 (B14)	06:12 20:22	05:03 21:24	04:26 22:07	05:43 21:57	06:45 20:37	18	07:48 (B14) 08:06 (B14)			07:46 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	23	06:59 (B14) 07:24 (B14)	06:09 20:24	05:01 21:25	04:26 22:08	05:45 21:55	06:47 20:34	22	07:46 (B14) 08:08 (B14)			07:48 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	25	06:57 (B14) 07:24 (B14)	06:07 20:26	04:59 21:27	04:25 22:08	05:47 21:54	06:49 20:31	25	07:44 (B14) 08:09 (B14)			07:50 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	27	06:56 (B14) 07:24 (B14)	06:04 20:28	04:57 21:29	04:25 22:09	05:49 21:52	06:51 20:29	26	07:43 (B14) 08:09 (B14)			07:52 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	28	06:56 (B14) 07:25 (B14)	06:02 20:31	04:55 21:31	04:25 22:09	05:51 21:51	06:53 20:47	29	07:42 (B14) 08:10 (B14)			07:55 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	29	06:55 (B14) 07:25 (B14)	05:59 20:33	04:54 21:33	04:25 22:10	05:53 21:49	06:55 20:45	30	07:41 (B14) 08:10 (B14)			07:57 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	30	06:54 (B14) 07:24 (B14)	05:57 20:35	04:52 21:35	04:25 22:10	05:55 21:48	06:57 20:42	29	07:40 (B14) 08:10 (B14)			07:59 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	30	06:55 (B14) 07:24 (B14)	05:54 20:37	04:50 21:37	04:26 22:10	05:57 21:46	06:59 20:40	30	07:40 (B14) 08:10 (B14)			08:01 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	29	06:54 (B14) 07:23 (B14)	05:52 20:39	04:48 21:38	04:26 22:10	05:59 21:45	07:01 20:37	29	07:40 (B14) 08:09 (B14)			08:03 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	29	06:54 (B14) 07:22 (B14)	05:49 20:41	04:47 21:40	04:26 22:10	06:01 21:43	07:03 20:35	30	07:39 (B14) 08:09 (B14)			08:05 15:53	08:51 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	28	06:55 (B14) 07:22 (B14)	05:47 20:43	04:45 21:42	04:27 22:10	06:03 21:41	07:05 20:32	29	07:39 (B14) 08:08 (B14)			07:07 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	27	06:55 (B14) 07:20 (B14)	05:45 20:45	04:44 21:43	04:27 22:10	06:05 21:39	07:07 20:30	27	07:40 (B14) 08:07 (B14)			07:10 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	25	06:56 (B14) 07:19 (B14)	05:42 20:47	04:42 21:45	04:28 22:10	06:07 21:38	07:09 20:27	26	07:40 (B14) 08:06 (B14)			07:12 15:50	08:17 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	23	06:58 (B14) 07:17 (B14)	05:40 20:49	04:41 21:47	04:28 22:10	06:09 21:36	07:11 20:24	24	07:41 (B14) 08:05 (B14)			07:14 15:48	08:19 15:44
29	08:20 16:39	07:11 17:47	06:57 18:47	19	07:59 (B14) 08:15 (B14)	05:37 20:51	04:40 21:48	04:29 22:10	06:11 21:34	07:13 20:22	21	07:42 (B14) 08:03 (B14)			07:16 15:47	08:21 15:45
30	08:19 16:41	07:04 17:49	06:54 18:49	16	08:02 (B14) 08:10 (B14)	05:35 20:53	04:38 21:50	04:29 22:09	06:13 21:32	07:15 20:19	17	07:44 (B14) 08:01 (B14)			07:18 15:46	08:22 15:46
31	08:17 16:43	07:02 17:51	06:52 18:51	8			04:37 21:51	05:14 21:30	06:15 20:17			07:20 16:38			08:51 15:47	
Potential sun hours	235	266	366		426	508	528	529	469	385		324		247	216	
Total, worst case				439						432		12				
Sun reduction				0.41						0.43		0.26				
Oper. time red.				0.98						0.98		0.98				
Wind dir. red.				0.63						0.63		0.63				
Total reduction				0.26						0.27		0.16				
Total, real				112						115		2				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Silavinas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (224)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:12 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:43
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:24 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:46 16:00	07:58 17:03	06:50 18:05	06:28 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:15	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:05	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:52 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:35 17:26	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:54 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:26 22:10	04:56 21:47	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:50	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	08:14 17:45	08:18 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	07:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 17:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Skola (kad. apz. 56960040345001) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (152)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	09:35 (B22)	07:11	06:49	05:33
	15:48	16:45	10:18 (B22)	17:48	19:53	20:55
2	08:50	08:13	09:35 (B22)	07:08	06:46	05:30
	15:49	16:47	10:18 (B22)	17:50	19:55	20:57
3	08:50	08:11	09:36 (B22)	07:06	06:43	05:28
	15:51	16:50	10:18 (B22)	17:52	19:57	21:00
4	08:50	08:09	09:36 (B22)	07:03	06:41	05:26
	15:52	16:52	10:18 (B22)	17:54	19:59	21:02
5	08:49	08:07	09:37 (B22)	07:00	06:38	05:23
	15:53	16:54	10:18 (B22)	17:56	20:01	21:04
6	08:49	08:05	09:36 (B22)	06:58	06:35	05:21
	15:55	16:56	10:18 (B22)	17:58	20:03	21:06
7	08:48	08:03	09:37 (B22)	06:55	06:33	05:19
	15:56	16:59	10:18 (B22)	18:00	20:05	21:08
8	08:48	08:01	09:38 (B22)	06:53	06:30	05:17
	15:58	17:01	10:17 (B22)	18:03	20:08	21:10
9	08:47	07:58	09:38 (B22)	06:50	06:28	05:15
	15:59	17:03	10:16 (B22)	18:05	20:10	21:12
10	08:46	07:56	09:39 (B22)	06:47	06:25	05:13
	16:01	17:05	10:16 (B22)	18:07	20:12	21:14
11	08:45	09:47 (B22)	07:54	06:45	06:22	05:11
	16:03	09:55 (B22)	17:08	10:15 (B22)	18:09	20:14
12	08:44	09:45 (B22)	07:52	06:42	06:20	05:08
	16:04	09:58 (B22)	17:10	10:14 (B22)	18:11	20:16
13	08:43	09:43 (B22)	07:49	06:40	06:17	05:06
	16:06	10:00 (B22)	17:12	10:13 (B22)	18:13	20:18
14	08:42	09:42 (B22)	07:47	06:37	06:14	05:04
	16:08	10:02 (B22)	17:14	10:11 (B22)	18:15	20:20
15	08:41	09:40 (B22)	07:45	06:34	06:12	05:03
	16:10	10:03 (B22)	17:17	10:09 (B22)	18:18	20:22
16	08:40	09:40 (B22)	07:43	06:32	06:09	05:01
	16:12	10:05 (B22)	17:19	10:06 (B22)	18:20	20:24
17	08:39	09:40 (B22)	07:40	06:29	06:07	04:59
	16:14	10:07 (B22)	17:21	10:02 (B22)	18:22	20:26
18	08:37	09:39 (B22)	07:38	06:26	06:04	04:57
	16:16	10:08 (B22)	17:23	18:24	20:28	21:29
19	08:36	09:38 (B22)	07:36	06:24	06:02	04:55
	16:18	10:09 (B22)	17:26	18:26	20:30	21:31
20	08:35	09:38 (B22)	07:33	06:21	05:59	04:53
	16:20	10:11 (B22)	17:28	18:28	20:33	21:33
21	08:33	09:37 (B22)	07:31	06:18	05:57	04:52
	16:22	10:11 (B22)	17:30	18:30	20:35	21:35
22	08:32	09:36 (B22)	07:28	06:16	05:54	04:50
	16:24	10:12 (B22)	17:32	18:32	20:37	21:37
23	08:30	09:36 (B22)	07:26	06:13	05:52	04:48
	16:26	10:13 (B22)	17:34	18:34	20:39	21:38
24	08:29	09:36 (B22)	07:23	06:10	05:49	04:47
	16:28	10:14 (B22)	17:37	18:36	20:41	21:40
25	08:27	09:36 (B22)	07:21	06:07	05:47	04:45
	16:30	10:15 (B22)	17:39	18:38	20:43	21:42
26	08:26	09:36 (B22)	07:18	06:05	05:44	04:44
	16:32	10:16 (B22)	17:41	18:41	20:45	21:43
27	08:24	09:36 (B22)	07:16	06:02	05:42	04:42
	16:34	10:16 (B22)	17:43	18:43	20:47	21:45
28	08:22	09:36 (B22)	07:13	05:59	05:40	04:41
	16:36	10:17 (B22)	17:45	18:45	20:49	21:47
29	08:20	09:36 (B22)		06:57	05:37	04:40
	16:39	10:17 (B22)		19:47	20:51	21:48
30	08:18	09:36 (B22)		06:54	05:35	04:38
	16:41	10:18 (B22)		19:49	20:53	21:50
31	08:17	09:36 (B22)		06:51		04:37
	16:43	10:18 (B22)		19:51		21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case	656	584				
Sun reduction	0.13	0.20				
Oper. time red.	0.98	0.98				
Wind dir. red.	0.61	0.61				
Total reduction	0.08	0.12				
Total, real	52	70				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

## SHADOW - Calendar

Shadow receptor: Skola (kad. apz. 56960040345001) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (152)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	09:09 (B22) 09:46 (B22)
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	09:08 (B22) 09:46 (B22)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	09:08 (B22) 09:47 (B22)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	09:07 (B22) 09:47 (B22)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	09:06 (B22) 09:47 (B22)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	09:06 (B22) 09:48 (B22)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	09:06 (B22) 09:48 (B22)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	09:06 (B22) 09:49 (B22)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	09:06 (B22) 09:49 (B22)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	09:07 (B22) 09:49 (B22)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	09:07 (B22) 09:49 (B22)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	09:06 (B22) 09:49 (B22)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	09:07 (B22) 09:49 (B22)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	09:08 (B22) 09:49 (B22)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	09:08 (B22) 09:48 (B22)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	09:09 (B22) 09:49 (B22)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	09:09 (B22) 09:48 (B22)
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	09:10 (B22) 09:48 (B22)
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	09:11 (B22) 09:48 (B22)
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	09:11 (B22) 09:47 (B22)
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	09:12 (B22) 09:46 (B22)
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	09:14 (B22) 09:47 (B22)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	09:15 (B22) 09:46 (B22)
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	09:16 (B22) 09:45 (B22)
25	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	09:17 (B22) 09:44 (B22)
26	05:04 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	09:18 (B22) 09:43 (B22)
27	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	09:20 (B22) 09:43 (B22)
28	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	09:22 (B22) 09:42 (B22)
29	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	09:24 (B22) 09:41 (B22)
30	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	09:26 (B22) 09:40 (B22)
31	05:14 21:30	06:15 20:17		07:20 16:38	09:09 (B22) 09:44 (B22)	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case				182	1058	9
Sun reduction				0.26	0.08	0.07
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.61	0.61	0.61
Total reduction				0.15	0.05	0.04
Total, real				28	52	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Skola (kad. apz. 56960040345002) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (144)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	09:37 (B22) 10:21 (B22)	07:11 17:48	06:49 19:53	05:33 21:53
2	08:50 15:49	08:13 16:47	09:38 (B22) 10:22 (B22)	07:08 17:50	06:46 19:55	05:30 21:54
3	08:50 15:51	08:11 16:50	09:38 (B22) 10:22 (B22)	07:06 17:52	06:43 19:57	05:28 21:55
4	08:50 15:52	08:09 16:52	09:38 (B22) 10:22 (B22)	07:03 17:54	06:41 19:59	05:26 21:57
5	08:49 15:53	08:07 16:54	09:39 (B22) 10:23 (B22)	07:00 17:56	06:38 20:01	05:23 21:58
6	08:49 15:55	08:05 16:56	09:38 (B22) 10:22 (B22)	06:58 17:58	06:35 20:03	05:21 21:59
7	08:48 15:56	08:03 16:59	09:39 (B22) 10:22 (B22)	06:55 18:00	06:33 20:05	05:19 21:08
8	08:48 15:58	08:01 17:01	09:40 (B22) 10:22 (B22)	06:53 18:03	06:30 20:08	05:17 21:10
9	08:47 15:59	07:58 17:03	09:40 (B22) 10:21 (B22)	06:50 18:05	06:28 20:10	05:15 21:12
10	08:46 16:01	07:56 17:05	09:41 (B22) 10:20 (B22)	06:47 18:07	06:25 20:12	05:13 21:14
11	08:45 16:03	09:49 (B22) 09:59 (B22)	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16
12	08:44 16:04	09:47 (B22) 10:02 (B22)	07:52 17:10	06:42 18:11	06:20 20:16	05:08 21:18
13	08:43 16:06	09:45 (B22) 10:04 (B22)	07:49 17:12	06:40 18:13	06:17 20:18	05:06 21:20
14	08:42 16:08	09:44 (B22) 10:06 (B22)	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22
15	08:41 16:10	09:43 (B22) 10:07 (B22)	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24
16	08:40 16:12	09:42 (B22) 10:09 (B22)	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25
17	08:39 16:14	09:42 (B22) 10:11 (B22)	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27
18	08:37 16:16	09:41 (B22) 10:12 (B22)	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29
19	08:36 16:18	09:40 (B22) 10:12 (B22)	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31
20	08:35 16:20	09:40 (B22) 10:14 (B22)	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33
21	08:33 16:22	09:40 (B22) 10:15 (B22)	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35
22	08:32 16:24	09:39 (B22) 10:16 (B22)	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37
23	08:30 16:26	09:38 (B22) 10:16 (B22)	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38
24	08:29 16:28	09:39 (B22) 10:18 (B22)	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40
25	08:27 16:30	09:39 (B22) 10:19 (B22)	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:42
26	08:26 16:32	09:38 (B22) 10:19 (B22)	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43
27	08:24 16:34	09:38 (B22) 10:20 (B22)	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45
28	08:22 16:36	09:38 (B22) 10:21 (B22)	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:47
29	08:20 16:39	09:38 (B22) 10:21 (B22)		06:57 19:47	05:37 20:51	04:40 21:48
30	08:18 16:41	09:38 (B22) 10:22 (B22)		06:54 19:49	05:35 20:53	04:38 21:50
31	08:17 16:43	09:38 (B22) 10:22 (B22)		06:51 19:51		04:37 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case	689	646				
Sun reduction	0.13	0.20				
Oper. time red.	0.98	0.98				
Wind dir. red.	0.61	0.61				
Total reduction	0.08	0.12				
Total, real	55	77				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Skola (kad. apz. 56960040345002) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (144)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	09:10 (B22) 09:50 (B22)
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	09:09 (B22) 09:50 (B22)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	09:10 (B22) 09:51 (B22)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	09:09 (B22) 09:51 (B22)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	09:08 (B22) 09:51 (B22)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	09:09 (B22) 09:52 (B22)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	09:08 (B22) 09:52 (B22)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	09:09 (B22) 09:53 (B22)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	09:08 (B22) 09:53 (B22)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	09:09 (B22) 09:53 (B22)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	09:09 (B22) 09:53 (B22)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	09:09 (B22) 09:52 (B22)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	09:10 (B22) 09:53 (B22)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	09:10 (B22) 09:52 (B22)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	09:10 (B22) 09:52 (B22)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	09:11 (B22) 09:52 (B22)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	09:12 (B22) 09:52 (B22)
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	09:13 (B22) 09:52 (B22)
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	09:13 (B22) 09:51 (B22)
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	09:14 (B22) 09:51 (B22)
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	09:15 (B22) 09:50 (B22)
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	09:16 (B22) 09:50 (B22)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	09:17 (B22) 09:49 (B22)
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	09:18 (B22) 09:49 (B22)
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	09:19 (B22) 09:48 (B22)
26	05:04 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:15 15:51	09:20 (B22) 09:47 (B22)
27	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:47	08:17 15:49	09:23 (B22) 09:47 (B22)
28	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45	08:19 15:48	09:24 (B22) 09:46 (B22)
29	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	09:26 (B22) 09:45 (B22)
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:40	08:22 15:46	09:28 (B22) 09:43 (B22)
31	05:14 21:30	06:15 20:17		08:20 16:38	09:10 (B22) 09:49 (B22)	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case				226	1104	14
Sun reduction				0.26	0.08	0.07
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.61	0.61	0.61
Total reduction				0.15	0.05	0.04
Total, real				35	54	1

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Skola (kad. apz. 56960040345005) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (143)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	09:44 (B22) 10:28 (B22)	07:11 17:48	06:49 19:53	05:33 20:55
2	08:50 15:49	08:13 16:47	09:44 (B22) 10:28 (B22)	07:08 17:50	06:46 19:55	05:30 20:57
3	08:50 15:51	08:11 16:50	09:45 (B22) 10:28 (B22)	07:06 17:52	06:43 19:57	05:28 21:00
4	08:50 15:52	08:09 16:52	09:45 (B22) 10:28 (B22)	07:03 17:54	06:41 19:59	05:26 21:02
5	08:49 15:53	08:07 16:54	09:46 (B22) 10:28 (B22)	07:00 17:56	06:38 20:01	05:23 21:04
6	08:49 15:55	09:57 (B22) 10:00 (B22)	09:46 (B22) 10:27 (B22)	06:58 17:58	06:35 20:03	05:21 21:06
7	08:48 15:56	09:54 (B22) 10:04 (B22)	09:46 (B22) 10:27 (B22)	06:55 18:00	06:33 20:05	05:19 21:08
8	08:48 15:58	09:52 (B22) 10:06 (B22)	09:47 (B22) 10:27 (B22)	06:53 18:03	06:30 20:08	05:17 21:10
9	08:47 15:59	09:51 (B22) 10:08 (B22)	09:47 (B22) 10:26 (B22)	06:50 18:05	06:28 20:10	05:15 21:12
10	08:46 16:01	09:50 (B22) 10:10 (B22)	09:49 (B22) 10:25 (B22)	06:47 18:07	06:25 20:12	05:13 21:14
11	08:45 16:03	09:49 (B22) 10:12 (B22)	09:50 (B22) 10:25 (B22)	06:45 18:09	06:22 20:14	05:11 21:16
12	08:44 16:04	09:49 (B22) 10:13 (B22)	09:51 (B22) 10:23 (B22)	06:42 18:11	06:20 20:16	05:08 21:18
13	08:43 16:06	09:47 (B22) 10:14 (B22)	09:53 (B22) 10:22 (B22)	06:40 18:13	06:17 20:18	05:06 21:20
14	08:42 16:08	09:47 (B22) 10:16 (B22)	09:54 (B22) 10:19 (B22)	06:37 18:15	06:14 20:20	05:04 21:22
15	08:41 16:10	09:46 (B22) 10:16 (B22)	09:57 (B22) 10:17 (B22)	06:34 18:18	06:12 20:22	05:03 21:24
16	08:40 16:12	09:46 (B22) 10:18 (B22)	10:00 (B22) 10:13 (B22)	06:32 18:20	06:09 20:24	05:01 21:25
17	08:39 16:14	09:46 (B22) 10:20 (B22)	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08
18	08:37 16:16	09:45 (B22) 10:20 (B22)	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	09:45 (B22) 10:21 (B22)	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09
20	08:35 16:20	09:45 (B22) 10:22 (B22)	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10
21	08:33 16:22	09:44 (B22) 10:23 (B22)	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	09:44 (B22) 10:24 (B22)	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10
23	08:30 16:26	09:44 (B22) 10:24 (B22)	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 16:28	09:44 (B22) 10:26 (B22)	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10
25	08:27 16:30	09:44 (B22) 10:26 (B22)	06:07 18:38	05:47 20:43	04:45 21:42	04:26 22:10
26	08:26 16:32	09:44 (B22) 10:27 (B22)	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34	09:44 (B22) 10:27 (B22)	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 16:36	09:44 (B22) 10:28 (B22)	05:59 18:45	05:40 20:49	04:41 21:47	04:28 22:10
29	08:20 16:39	09:44 (B22) 10:28 (B22)	06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10
30	08:18 16:41	09:44 (B22) 10:28 (B22)	06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09
31	08:17 16:43	09:44 (B22) 10:29 (B22)	06:51 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case	837	567				
Sun reduction	0.13	0.20				
Oper. time red.	0.98	0.98				
Wind dir. red.	0.61	0.61				
Total reduction	0.08	0.12				
Total, real	67	68				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Skola (kad. apz. 56960040345005) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (143)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	09:18 (B22) 09:55 (B22)	08:24 15:45	09:31 (B22) 23
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	09:17 (B22) 09:55 (B22)	08:26 15:44	09:33 (B22) 20
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	09:17 (B22) 09:57 (B22)	08:28 15:43	09:34 (B22) 17
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	09:16 (B22) 09:57 (B22)	08:29 15:42	09:36 (B22) 14
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	09:15 (B22) 09:57 (B22)	08:31 15:42	09:38 (B22) 11
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	09:15 (B22) 09:58 (B22)	08:32 15:41	09:42 (B22) 5
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	09:15 (B22) 09:58 (B22)	08:34 15:40	
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	09:15 (B22) 09:59 (B22)	08:35 15:40	
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	09:15 (B22) 09:59 (B22)	08:37 15:39	
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	09:15 (B22) 10:00 (B22)	08:38 15:39	
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	09:15 (B22) 09:59 (B22)	08:39 15:38	
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	09:15 (B22) 09:59 (B22)	08:40 15:38	
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	09:16 (B22) 10:00 (B22)	08:42 15:38	
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	09:16 (B22) 09:59 (B22)	08:43 15:38	
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	09:16 (B22) 09:59 (B22)	08:44 15:38	
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	09:17 (B22) 10:00 (B22)	08:45 15:38	
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	09:17 (B22) 09:59 (B22)	08:46 15:38	
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	09:18 (B22) 10:00 (B22)	08:46 15:38	
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	09:19 (B22) 09:59 (B22)	08:47 15:38	
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	09:19 (B22) 09:59 (B22)	08:48 15:39	
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	09:19 (B22) 09:58 (B22)	08:48 15:39	
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	09:21 (B22) 09:58 (B22)	08:49 15:39	
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	09:22 (B22) 09:58 (B22)	08:50 15:40	
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	09:22 (B22) 09:57 (B22)	08:50 15:41	
25	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	09:23 (B22) 09:57 (B22)	08:50 15:41	
26	05:04 21:39	06:05 20:30	07:07 19:07	07:10 16:50	09:29 (B22) 09:44 (B22)	08:15 15:51	08:51 15:42	
27	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	09:25 (B22) 09:47 (B22)	08:17 15:49	08:51 15:43	
28	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	09:23 (B22) 09:49 (B22)	08:19 15:48	08:51 15:44	
29	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	09:22 (B22) 09:51 (B22)	08:21 15:47	08:51 15:45	
30	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	09:20 (B22) 09:52 (B22)	08:22 15:46	08:51 15:46	
31	05:14 21:30	06:15 20:17		07:20 16:38	09:18 (B22) 09:53 (B22)		08:51 15:47	
Potential sun hours	529	469	385	324	247		216	
Total, worst case				159	1166		90	
Sun reduction				0.26	0.08		0.07	
Oper. time red.				0.98	0.98		0.98	
Wind dir. red.				0.61	0.61		0.61	
Total reduction				0.15	0.05		0.04	
Total, real				25	57		4	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Smelceja - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (216)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:33	08:25 15:44
3	08:50 15:50	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:34 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:15	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:25	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:38	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:46
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Smelceju majas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (197)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:58	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:45
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Spridiš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (82)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	09:03 (B22) 17:48	07:11 17:48	09:03 (B22) 19:53	06:49 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:17 16:36
2	08:50 15:49	08:13 16:47	09:00 (B22) 17:50	07:08 17:50	09:11 (B22) 19:55	06:46 20:57	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	06:19 18:51	07:19 16:34
3	08:50 15:51	08:11 16:50	08:58 (B22) 17:52	07:06 17:52	09:19 (B22) 19:57	06:43 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:19 20:09	06:21 18:48	07:21 16:32
4	08:50 15:52	08:09 16:52	08:57 (B22) 17:54	07:03 17:54	09:21 (B22) 19:59	06:41 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:21 20:06	06:23 18:46	07:23 16:29
5	08:49 15:53	08:07 16:54	08:56 (B22) 17:56	07:00 17:56	09:23 (B22) 19:59	06:38 21:04	05:23 21:58	04:32 22:07	04:34 21:20	05:23 20:03	06:25 18:43	07:25 16:27
6	08:49 15:55	08:05 16:56	08:54 (B22) 17:58	06:58 17:58	09:24 (B22) 19:58	06:35 21:06	05:21 21:59	04:31 22:06	04:35 21:17	05:25 20:01	06:27 18:40	07:27 16:25
7	08:48 15:56	08:03 16:59	08:53 (B22) 18:01	06:55 18:01	09:25 (B22) 19:58	06:33 21:08	05:19 22:00	04:36 22:05	04:36 21:15	05:27 19:58	06:29 18:38	07:30 16:23
8	08:48 15:58	08:01 17:01	08:53 (B22) 18:03	06:53 18:03	09:26 (B22) 19:59	06:30 21:10	05:17 22:01	04:37 22:04	04:37 21:13	05:29 19:55	06:31 18:35	07:32 16:21
9	08:47 15:59	07:58 17:03	08:51 (B22) 18:05	06:50 18:05	09:27 (B22) 19:59	06:28 21:12	05:15 22:02	04:38 22:03	04:38 21:11	05:31 19:53	06:33 18:32	07:34 16:19
10	08:46 16:01	07:56 17:05	08:51 (B22) 18:07	06:47 18:07	09:28 (B22) 19:59	06:25 21:14	05:13 22:03	04:39 22:02	05:33 21:08	05:33 19:50	06:35 18:30	07:36 16:17
11	08:45 16:03	07:54 17:08	08:51 (B22) 18:09	06:45 18:09	09:29 (B22) 19:59	06:22 21:16	05:11 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15
12	08:44 16:05	07:52 17:10	08:50 (B22) 18:11	06:42 18:11	09:30 (B22) 19:59	06:20 21:18	05:08 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13
13	08:43 16:06	07:50 17:12	08:50 (B22) 18:13	06:40 18:13	09:31 (B22) 19:59	06:17 21:20	05:06 22:06	04:43 22:02	05:39 21:59	06:41 19:42	07:42 18:22	07:49 16:11
14	08:42 16:08	07:47 17:14	08:49 (B22) 18:15	06:37 18:15	09:32 (B22) 19:59	06:15 21:22	05:04 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09
15	08:41 16:10	07:45 17:17	08:49 (B22) 18:18	06:34 18:18	09:33 (B22) 19:59	06:12 21:24	05:03 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08
16	08:40 16:12	07:43 17:19	08:49 (B22) 18:20	06:32 18:20	09:34 (B22) 19:59	06:09 21:25	05:01 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06
17	08:39 16:14	07:40 17:21	08:49 (B22) 18:22	06:29 18:22	09:35 (B22) 19:59	06:07 21:27	04:59 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04
18	08:37 16:16	07:38 17:23	08:49 (B22) 18:24	06:26 18:24	09:36 (B22) 19:59	06:04 21:29	04:57 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02
19	08:36 16:18	07:36 17:26	08:50 (B22) 18:26	06:24 18:26	09:37 (B22) 19:59	06:02 21:31	04:55 22:09	04:51 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01
20	08:35 16:20	07:33 17:28	08:50 (B22) 18:28	06:21 18:28	09:38 (B22) 19:59	05:59 21:33	04:53 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59
21	08:33 16:22	07:31 17:30	08:50 (B22) 18:30	06:18 18:30	09:39 (B22) 19:59	05:57 21:35	04:52 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58
22	08:32 16:24	07:28 17:32	08:51 (B22) 18:32	06:16 18:32	09:40 (B22) 19:59	05:54 21:37	04:50 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56
23	08:30 16:26	07:26 17:34	08:52 (B22) 18:34	06:13 18:34	09:41 (B22) 19:59	05:52 21:38	04:48 22:10	04:59 21:45	05:59 20:37	08:03 19:15	08:09 17:57	08:15 15:55
24	08:29 16:28	07:23 17:37	08:52 (B22) 18:36	06:10 18:36	09:42 (B22) 19:59	05:49 21:40	04:47 22:10	05:01 21:43	06:01 20:35	08:05 19:12	08:11 17:55	08:17 15:53
25	08:27 16:30	07:21 17:39	08:54 (B22) 18:38	06:07 18:38	09:43 (B22) 19:59	05:47 21:42	04:45 22:10	05:03 21:41	06:03 20:32	08:07 19:10	08:13 16:52	08:19 15:52
26	08:26 16:32	07:18 17:41	08:55 (B22) 18:41	06:05 18:41	09:44 (B22) 19:59	05:44 21:43	04:44 22:10	05:04 21:39	06:05 20:30	08:09 19:07	08:15 16:50	08:21 15:51
27	08:24 16:34	07:16 17:43	08:56 (B22) 18:43	06:02 18:43	09:45 (B22) 19:59	05:42 21:45	04:42 22:10	05:06 21:38	06:07 20:27	08:11 19:04	08:17 16:47	08:23 15:49
28	08:22 16:36	07:13 17:45	08:57 (B22) 18:45	05:59 18:45	09:46 (B22) 19:59	05:40 21:47	04:41 22:10	05:08 21:36	06:09 20:24	08:13 19:02	08:19 16:45	08:25 15:48
29	08:20 16:39	07:11 17:47	08:58 (B22) 18:47	05:57 18:47	09:47 (B22) 19:59	05:37 21:48	04:40 22:10	05:10 21:34	06:11 20:22	08:15 19:00	08:21 16:43	08:27 15:47
30	08:18 16:41	07:03 17:50	08:59 (B22) 18:49	05:55 18:49	09:48 (B22) 19:59	05:35 21:50	04:38 22:09	05:12 21:32	06:13 20:19	08:17 19:56	08:23 16:41	08:29 15:46
31	08:17 16:43	07:00 17:53	09:00 (B22) 18:50	05:53 18:50	09:49 (B22) 19:59	05:33 21:51	04:37 22:10	05:14 21:30	06:15 20:17	08:19 19:58	08:25 16:38	08:31 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		899	8							649	263	
Sun reduction		0.20	0.41							0.26	0.08	
Oper. time red.		0.98	0.98							0.98	0.98	
Wind dir. red.		0.60	0.60							0.60	0.60	
Total reduction		0.12	0.24							0.15	0.05	
Total, real		106	2							98	13	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Spares - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (203)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:43
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:46 16:00	07:58 17:03	06:50 18:05	06:28 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:15	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:05	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:05 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:35 17:26	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:50	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	08:14 17:45	08:18 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	08:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Stacija Trepe 2 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (3)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:28 15:44
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:26 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
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14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:37 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:54 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	05:00 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:50 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
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26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:06 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Starumeni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (121)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	08:23 (B22) 08:32 (B22)	06:45 18:09	05:11 20:14	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	08:20 (B22) 08:34 (B22)	06:42 18:11	05:09 20:16	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	08:18 (B22) 08:36 (B22)	06:40 18:13	05:07 20:18	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	08:16 (B22) 08:36 (B22)	06:37 18:15	05:05 20:20	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	08:16 (B22) 08:37 (B22)	06:34 18:18	05:03 20:22	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	08:15 (B22) 08:37 (B22)	06:32 18:20	05:01 20:24	04:25 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	08:15 (B22) 08:38 (B22)	06:29 18:22	05:07 20:26	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:50 (B22) 09:05 (B22)	07:57 16:04
18	08:38 16:16	07:38 17:23	08:14 (B22) 08:38 (B22)	06:26 18:24	05:04 20:28	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:52 18:09	08:48 (B22) 09:06 (B22)	07:59 16:02
19	08:36 16:18	07:36 17:26	08:15 (B22) 08:38 (B22)	06:24 18:26	05:02 20:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:47 (B22) 09:08 (B22)	08:01 16:01
20	08:35 16:20	07:33 17:28	08:14 (B22) 08:38 (B22)	06:21 18:28	05:59 20:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:46 (B22) 09:08 (B22)	08:03 15:59
21	08:33 16:22	07:31 17:30	08:15 (B22) 08:38 (B22)	06:18 18:30	05:57 20:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:45 (B22) 09:08 (B22)	08:05 15:58
22	08:32 16:24	07:28 17:32	08:15 (B22) 08:37 (B22)	06:16 18:32	05:54 20:37	04:25 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:45 (B22) 09:08 (B22)	08:07 15:56
23	08:30 16:26	07:26 17:34	08:17 (B22) 08:36 (B22)	06:13 18:34	05:52 20:39	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:45 (B22) 09:09 (B22)	08:09 15:55
24	08:29 16:28	07:23 17:37	08:17 (B22) 08:34 (B22)	06:10 18:36	05:49 20:41	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:45 (B22) 09:08 (B22)	08:11 15:53
25	08:27 16:30	07:21 17:39	08:19 (B22) 08:33 (B22)	06:08 18:38	05:47 20:43	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	07:44 (B22) 08:08 (B22)	08:13 15:52
26	08:26 16:32	07:18 17:41	08:22 (B22) 08:30 (B22)	06:05 18:41	05:44 20:45	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	07:45 (B22) 08:08 (B22)	08:15 15:51
27	08:24 16:34	07:16 17:43	08:22 (B22) 08:30 (B22)	06:02 18:40	05:42 20:45	04:27 22:10	05:06 21:39	06:07 20:30	07:09 19:07	07:12 16:50	07:46 (B22) 08:08 (B22)	08:17 15:51
28	08:22 16:36	07:13 17:45	08:22 (B22) 08:30 (B22)	06:00 18:40	05:40 20:49	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	07:46 (B22) 08:05 (B22)	08:19 15:48
29	08:20 16:39	07:11 17:48	08:20 (B22) 08:30 (B22)	05:57 18:40	05:37 20:49	04:20 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	07:48 (B22) 08:05 (B22)	08:21 15:47
30	08:19 16:41	07:10 17:49	08:20 (B22) 08:30 (B22)	05:55 18:40	05:35 20:49	04:38 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	07:50 (B22) 08:03 (B22)	08:22 15:46
31	08:17 16:43	07:09 17:49	08:20 (B22) 08:30 (B22)	05:51 18:40	05:33 20:49	04:37 22:10	05:14 21:30	06:15 20:17	07:20 16:38	07:23 16:38	07:53 (B22) 08:01 (B22)	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		301								304		
Sun reduction		0.20								0.26		
Oper. time red.		0.98								0.98		
Wind dir. red.		0.62								0.62		
Total reduction		0.12								0.16		
Total, real		37								48		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Stepi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (166)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:04	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	05:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Straumenini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (11)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January		February		March	April	May	June	July	August	September	October	November	December
1	08:51		09:50 (B22)	08:15	10:08 (B22)	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:23
	15:48	27	10:17 (B22)	16:45	10:18 (B22)	17:48	19:53	20:55	21:53	22:09	21:28	20:14	18:54	16:36
2	08:51		09:51 (B22)	08:13		07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25
	15:49	28	10:19 (B22)	16:47		17:50	19:55	20:58	21:54	22:09	21:26	20:11	18:51	16:34
3	08:50		09:50 (B22)	08:11		07:06	06:43	05:28	04:34	04:32	05:19	06:21	07:21	07:27
	15:51	29	10:19 (B22)	16:50		17:52	19:57	21:00	21:55	22:08	21:24	20:09	18:48	16:32
4	08:50		09:50 (B22)	08:09		07:03	06:41	05:26	04:33	04:33	05:21	06:23	07:23	07:29
	15:52	29	10:19 (B22)	16:52		17:54	19:59	21:02	21:57	22:07	21:22	20:06	18:46	16:29
5	08:49		09:51 (B22)	08:07		07:00	06:38	05:23	04:32	04:34	05:23	06:25	07:25	07:31
	15:53	30	10:21 (B22)	16:54		17:56	20:01	21:04	21:58	22:07	21:20	20:03	18:43	16:27
6	08:49		09:51 (B22)	08:05		06:58	06:35	05:21	04:31	04:35	05:25	06:27	07:27	07:33
	15:55	30	10:21 (B22)	16:56		17:58	20:03	21:06	21:59	22:06	21:17	20:01	18:40	16:25
7	08:48		09:51 (B22)	08:03		06:55	06:33	05:19	04:30	04:36	05:27	06:29	07:30	07:36
	15:56	31	10:22 (B22)	16:59		18:00	20:05	21:08	22:00	22:05	21:15	19:58	18:38	16:23
8	08:48		09:51 (B22)	08:01		06:53	06:30	05:17	04:29	04:37	05:29	06:31	07:32	07:38
	15:58	31	10:22 (B22)	17:01		18:03	20:08	21:10	22:01	22:04	21:13	19:55	18:35	16:21
9	08:47		09:51 (B22)	07:58		06:50	06:28	05:15	04:28	04:38	05:31	06:33	07:34	07:40
	15:59	32	10:23 (B22)	17:03		18:05	20:10	21:12	22:02	22:03	21:11	19:53	18:32	16:19
10	08:46		09:52 (B22)	07:56		06:47	06:25	05:13	04:28	04:39	05:33	06:35	07:36	07:42
	16:01	32	10:24 (B22)	17:05		18:07	20:12	21:14	22:03	22:02	21:08	19:50	18:30	16:17
11	08:45		09:52 (B22)	07:54		06:45	06:22	05:11	04:27	04:41	05:35	06:37	07:38	07:44
	16:03	32	10:24 (B22)	17:08		18:09	20:14	21:16	22:04	22:01	21:06	19:47	18:27	16:15
12	08:44		09:52 (B22)	07:52		06:42	06:20	05:08	04:27	04:42	05:37	06:39	07:40	07:46
	16:04	33	10:25 (B22)	17:10		18:11	20:16	21:18	22:05	22:00	21:04	19:45	18:25	16:13
13	08:43		09:52 (B22)	07:50		06:40	06:17	05:06	04:26	04:43	05:39	06:41	07:42	07:49
	16:06	33	10:25 (B22)	17:12		18:13	20:18	21:20	22:06	21:59	21:02	19:42	18:22	16:11
14	08:42		09:53 (B22)	07:47		06:37	06:14	05:04	04:26	04:45	05:41	06:43	07:44	07:51
	16:08	33	10:26 (B22)	17:14		18:15	20:20	21:22	22:07	21:58	20:59	19:39	18:19	16:09
15	08:41		09:53 (B22)	07:45		06:34	06:12	05:03	04:26	04:46	05:43	06:45	07:46	07:53
	16:10	34	10:27 (B22)	17:17		18:18	20:22	21:24	22:07	21:57	20:57	19:37	18:17	16:08
16	08:40		09:53 (B22)	07:43		06:32	06:09	05:01	04:25	04:48	05:45	06:47	07:48	07:55
	16:12	33	10:26 (B22)	17:19		18:20	20:24	21:26	22:08	21:55	20:54	19:34	18:14	16:06
17	08:39		09:54 (B22)	07:40		06:29	06:07	04:59	04:25	04:49	05:47	06:49	07:50	07:57
	16:14	33	10:27 (B22)	17:21		18:22	20:26	21:27	22:08	21:54	20:52	19:31	18:12	16:04
18	08:38		09:54 (B22)	07:38		06:26	06:04	04:57	04:25	04:51	05:49	06:51	07:52	07:59
	16:16	33	10:27 (B22)	17:23		18:24	20:28	21:29	22:09	21:52	20:50	19:29	18:09	16:02
19	08:36		09:54 (B22)	07:36		06:24	06:02	04:55	04:25	04:52	05:51	06:53	07:55	08:01
	16:18	33	10:27 (B22)	17:26		18:26	20:30	21:31	22:09	21:51	20:47	19:26	18:07	16:01
20	08:35		09:55 (B22)	07:33		06:21	05:59	04:53	04:25	04:54	05:53	06:55	07:57	08:03
	16:20	33	10:28 (B22)	17:28		18:28	20:33	21:33	22:10	21:49	20:45	19:23	18:04	15:59
21	08:33		09:55 (B22)	07:31		06:18	05:57	04:52	04:25	04:56	05:55	06:57	07:59	08:05
	16:22	33	10:28 (B22)	17:30		18:30	20:35	21:35	22:10	21:48	20:42	19:20	18:02	15:58
22	08:32		09:56 (B22)	07:28		06:16	05:54	04:50	04:25	04:57	05:57	06:59	08:01	08:07
	16:24	32	10:28 (B22)	17:32		18:32	20:37	21:37	22:10	21:46	20:40	19:18	17:59	15:56
23	08:30		09:56 (B22)	07:26		06:13	05:52	04:48	04:26	04:59	05:59	07:01	08:03	08:09
	16:26	31	10:27 (B22)	17:34		18:34	20:39	21:38	22:10	21:45	20:37	19:15	17:57	15:55
24	08:29		09:57 (B22)	07:23		06:10	05:49	04:47	04:26	05:01	06:01	07:03	08:05	08:11
	16:28	31	10:28 (B22)	17:37		18:36	20:41	21:40	22:10	21:43	20:35	19:12	17:55	15:53
25	08:27		09:58 (B22)	07:21		06:07	05:47	04:45	04:26	05:03	06:03	07:05	08:07	08:13
	16:30	30	10:28 (B22)	17:39		18:38	20:43	21:42	22:10	21:41	20:32	19:10	16:52	15:52
26	08:26		09:59 (B22)	07:18		06:05	05:44	04:44	04:27	05:04	06:05	07:07	08:10	08:15
	16:32	28	10:27 (B22)	17:41		18:41	20:45	21:43	22:10	21:39	20:30	19:07	16:50	15:51
27	08:24		10:00 (B22)	07:16		06:02	05:42	04:42	04:27	05:06	06:07	07:09	08:12	08:17
	16:34	26	10:26 (B22)	17:43		18:43	20:47	21:45	22:10	21:38	20:27	19:04	16:47	15:49
28	08:22		10:01 (B22)	07:13		06:00	05:40	04:41	04:28	05:08	06:09	07:11	08:14	08:19
	16:36	25	10:26 (B22)	17:45		18:45	20:49	21:47	22:10	21:36	20:24	19:02	16:45	15:48
29	08:20		10:02 (B22)			06:07	05:37	04:40	04:29	05:10	06:11	07:13	08:16	08:21
	16:39	23	10:25 (B22)			19:47	20:51	21:48	22:10	21:34	20:22	18:59	16:43	15:47
30	08:18		10:04 (B22)			06:04	05:35	04:38	04:29	05:12	06:13	07:15	08:18	08:22
	16:41	20	10:24 (B22)			19:49	20:53	21:50	22:09	21:32	20:19	18:56	16:40	15:46
31	08:17		10:06 (B22)			06:01		04:37		05:14	06:15		07:20	
	16:43	16	10:22 (B22)			19:51		21:51		21:30	20:17		16:38	
Potential sun hours	235		266		366	426	508	529	529	469	385	324	247	216
Total, worst case		924	10										604	839
Sun reduction		0.13	0.20										0.08	0.07
Oper. time red.		0.98	0.98										0.98	0.98
Wind dir. red.		0.61	0.61										0.61	0.61
Total reduction		0.08	0.12										0.05	0.04
Total, real		74	1										30	35

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Strauti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (57)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January		February		March	April	May	June
1	08:51	09:57 (B22)	08:15	09:53 (B22)	07:11	06:49	05:33	04:36
	15:48	13	10:10 (B22)	16:45	40	10:33 (B22)	17:48	19:53
2	08:50	09:57 (B22)	08:13	09:54 (B22)	07:08	06:46	05:30	04:35
	15:49	15	10:12 (B22)	16:47	39	10:33 (B22)	17:50	19:55
3	08:50	09:56 (B22)	08:11	09:55 (B22)	07:06	06:43	05:28	04:34
	15:51	17	10:13 (B22)	16:50	38	10:33 (B22)	17:52	19:57
4	08:50	09:55 (B22)	08:09	09:56 (B22)	07:03	06:41	05:26	04:33
	15:52	19	10:14 (B22)	16:52	37	10:33 (B22)	17:54	19:59
5	08:49	09:55 (B22)	08:07	09:57 (B22)	07:00	06:38	05:23	04:32
	15:53	21	10:16 (B22)	16:54	36	10:33 (B22)	17:56	20:01
6	08:49	09:55 (B22)	08:05	09:57 (B22)	06:58	06:35	05:21	04:31
	15:55	22	10:17 (B22)	16:56	34	10:31 (B22)	17:58	20:03
7	08:48	09:54 (B22)	08:03	09:58 (B22)	06:55	06:33	05:19	04:30
	15:56	24	10:18 (B22)	16:59	32	10:30 (B22)	18:00	20:05
8	08:48	09:54 (B22)	08:01	10:00 (B22)	06:53	06:30	05:17	04:29
	15:58	25	10:19 (B22)	17:01	30	10:30 (B22)	18:03	20:08
9	08:47	09:53 (B22)	07:58	10:01 (B22)	06:50	06:28	05:15	04:28
	15:59	27	10:20 (B22)	17:03	26	10:27 (B22)	18:05	20:10
10	08:46	09:53 (B22)	07:56	10:03 (B22)	06:47	06:25	05:13	04:28
	16:01	29	10:22 (B22)	17:05	23	10:26 (B22)	18:07	20:12
11	08:45	09:53 (B22)	07:54	10:05 (B22)	06:45	06:22	05:11	04:27
	16:03	30	10:23 (B22)	17:08	19	10:24 (B22)	18:09	20:14
12	08:44	09:53 (B22)	07:52	10:08 (B22)	06:42	06:20	05:08	04:27
	16:04	31	10:24 (B22)	17:10	12	10:20 (B22)	18:11	20:16
13	08:43	09:52 (B22)	07:49		06:40	06:17	05:06	04:26
	16:06	32	10:24 (B22)	17:12		18:13	20:18	21:20
14	08:42	09:52 (B22)	07:47		06:37	06:14	05:04	04:26
	16:08	34	10:26 (B22)	17:14		18:15	20:20	21:22
15	08:41	09:51 (B22)	07:45		06:34	06:12	05:03	04:26
	16:10	35	10:26 (B22)	17:17		18:18	20:22	21:24
16	08:40	09:52 (B22)	07:43		06:32	06:09	05:01	04:25
	16:12	35	10:27 (B22)	17:19		18:20	20:24	21:25
17	08:39	09:52 (B22)	07:40		06:29	06:07	04:59	04:25
	16:14	37	10:29 (B22)	17:21		18:22	20:26	21:27
18	08:37	09:52 (B22)	07:38		06:26	06:04	04:57	04:25
	16:16	37	10:29 (B22)	17:23		18:24	20:28	21:29
19	08:36	09:51 (B22)	07:36		06:24	06:02	04:55	04:25
	16:18	38	10:29 (B22)	17:26		18:26	20:30	21:31
20	08:35	09:52 (B22)	07:33		06:21	05:59	04:53	04:25
	16:20	39	10:31 (B22)	17:28		18:28	20:33	21:33
21	08:33	09:51 (B22)	07:31		06:18	05:57	04:52	04:25
	16:22	40	10:31 (B22)	17:30		18:30	20:35	21:35
22	08:32	09:51 (B22)	07:28		06:16	05:54	04:50	04:25
	16:24	40	10:31 (B22)	17:32		18:32	20:37	21:37
23	08:30	09:51 (B22)	07:26		06:13	05:52	04:48	04:26
	16:26	41	10:32 (B22)	17:34		18:34	20:39	21:38
24	08:29	09:52 (B22)	07:23		06:10	05:49	04:47	04:26
	16:28	41	10:33 (B22)	17:37		18:36	20:41	21:40
25	08:27	09:52 (B22)	07:21		06:07	05:47	04:45	04:26
	16:30	41	10:33 (B22)	17:39		18:38	20:43	21:42
26	08:26	09:52 (B22)	07:18		06:05	05:44	04:44	04:27
	16:32	42	10:34 (B22)	17:41		18:41	20:45	21:43
27	08:24	09:52 (B22)	07:16		06:02	05:42	04:42	04:27
	16:34	42	10:34 (B22)	17:43		18:43	20:47	21:45
28	08:22	09:52 (B22)	07:13		05:59	05:40	04:41	04:28
	16:36	42	10:34 (B22)	17:45		18:45	20:49	21:47
29	08:20	09:53 (B22)			06:57	05:37	04:40	04:29
	16:39	41	10:34 (B22)			19:47	20:51	21:48
30	08:18	09:53 (B22)			06:54	05:35	04:38	04:29
	16:41	41	10:34 (B22)			19:49	20:53	21:50
31	08:17	09:54 (B22)			06:51		04:37	
	16:43	40	10:34 (B22)			19:51	21:51	
Potential sun hours	235		266		366	426	508	529
Total, worst case	1011		366					
Sun reduction	0.13		0.20					
Oper. time red.	0.98		0.98					
Wind dir. red.	0.61		0.61					
Total reduction	0.08		0.12					
Total, real	81		44					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Strauti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (57)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	07:23	09:32 (B22) 08:24 09:35 (B22)
	22:09	21:28	20:14	18:54	16:36	24 09:56 (B22) 15:45 30 10:05 (B22)
2	04:31	05:18	06:19	07:19	07:25	09:30 (B22) 08:26 09:36 (B22)
	22:09	21:26	20:11	18:51	16:34	27 09:57 (B22) 15:44 29 10:05 (B22)
3	04:32	05:19	06:21	07:21	07:27	09:29 (B22) 08:28 09:36 (B22)
	22:08	21:24	20:09	18:48	16:32	30 09:59 (B22) 15:43 28 10:04 (B22)
4	04:33	05:21	06:23	07:23	07:29	09:28 (B22) 08:29 09:38 (B22)
	22:07	21:22	20:06	18:46	16:29	32 10:00 (B22) 15:42 26 10:04 (B22)
5	04:34	05:23	06:25	07:25	07:31	09:26 (B22) 08:31 09:39 (B22)
	22:07	21:20	20:03	18:43	16:27	35 10:01 (B22) 15:42 24 10:03 (B22)
6	04:35	05:25	06:27	07:27	07:33	09:26 (B22) 08:32 09:41 (B22)
	22:06	21:17	20:01	18:40	16:25	36 10:02 (B22) 15:41 22 10:03 (B22)
7	04:36	05:27	06:29	07:30	07:36	09:25 (B22) 08:34 09:41 (B22)
	22:05	21:15	19:58	18:38	16:23	38 10:03 (B22) 15:40 21 10:02 (B22)
8	04:37	05:29	06:31	07:32	07:38	09:25 (B22) 08:35 09:43 (B22)
	22:04	21:13	19:55	18:35	16:21	39 10:04 (B22) 15:40 19 10:02 (B22)
9	04:38	05:31	06:33	07:34	07:40	09:25 (B22) 08:37 09:44 (B22)
	22:03	21:11	19:53	18:32	16:19	39 10:04 (B22) 15:39 17 10:01 (B22)
10	04:39	05:33	06:35	07:36	07:42	09:25 (B22) 08:38 09:46 (B22)
	22:02	21:08	19:50	18:30	16:17	40 10:05 (B22) 15:39 15 10:01 (B22)
11	04:41	05:35	06:37	07:38	07:44	09:24 (B22) 08:39 09:47 (B22)
	22:01	21:06	19:47	18:27	16:15	41 10:05 (B22) 15:38 13 10:00 (B22)
12	04:42	05:37	06:39	07:40	07:46	09:24 (B22) 08:40 09:49 (B22)
	22:00	21:04	19:45	18:25	16:13	41 10:05 (B22) 15:38 11 10:00 (B22)
13	04:43	05:39	06:41	07:42	07:49	09:25 (B22) 08:42 09:50 (B22)
	21:59	21:02	19:42	18:22	16:11	41 10:06 (B22) 15:38 9 09:59 (B22)
14	04:45	05:41	06:43	07:44	07:51	09:24 (B22) 08:43 09:52 (B22)
	21:58	20:59	19:39	18:19	16:09	42 10:06 (B22) 15:38 6 09:58 (B22)
15	04:46	05:43	06:45	07:46	07:53	09:24 (B22) 08:44
	21:57	20:57	19:37	18:17	16:08	42 10:06 (B22) 15:38
16	04:48	05:45	06:47	07:48	07:55	09:25 (B22) 08:45
	21:55	20:54	19:34	18:14	16:06	42 10:07 (B22) 15:38
17	04:49	05:47	06:49	07:50	07:57	09:25 (B22) 08:46
	21:54	20:52	19:31	18:12	16:04	41 10:06 (B22) 15:38
18	04:51	05:49	06:51	07:52	07:59	09:26 (B22) 08:46
	21:52	20:50	19:29	18:09	16:02	41 10:07 (B22) 15:38
19	04:52	05:51	06:53	07:55	08:01	09:26 (B22) 08:47
	21:51	20:47	19:26	18:07	16:01	41 10:07 (B22) 15:38
20	04:54	05:53	06:55	07:57	08:03	09:26 (B22) 08:48
	21:49	20:45	19:23	18:04	15:59	40 10:06 (B22) 15:39
21	04:56	05:55	06:57	07:59	08:05	09:26 (B22) 08:48
	21:48	20:42	19:20	18:02	15:58	40 10:06 (B22) 15:39
22	04:57	05:57	06:59	08:01	08:07	09:28 (B22) 08:49
	21:46	20:40	19:18	17:59	15:56	39 10:07 (B22) 15:39
23	04:59	05:59	07:01	08:03	08:09	09:28 (B22) 08:50
	21:45	20:37	19:15	17:57	15:55	38 10:06 (B22) 15:40
24	05:01	06:01	07:03	08:05	08:11	09:29 (B22) 08:50
	21:43	20:35	19:12	17:55	15:53	37 10:06 (B22) 15:41
25	05:03	06:03	07:05	07:07	08:13	09:29 (B22) 08:50
	21:41	20:32	19:10	16:52	15:52	37 10:06 (B22) 15:41
26	05:04	06:05	07:07	07:10	08:15	09:30 (B22) 08:51
	21:39	20:30	19:07	16:50	15:51	35 10:05 (B22) 15:42
27	05:06	06:07	07:09	07:12	08:17	09:31 (B22) 08:51
	21:38	20:27	19:04	16:47	15:49	35 10:06 (B22) 15:43
28	05:08	06:09	07:11	07:14	08:19	09:32 (B22) 08:51
	21:36	20:24	19:02	16:45	15:48	34 10:06 (B22) 15:44
29	05:10	06:11	07:13	07:16	08:21	09:33 (B22) 08:51 10:00 (B22)
	21:34	20:22	18:59	16:43	15:47	33 10:06 (B22) 15:45 4 10:04 (B22)
30	05:12	06:13	07:15	07:18	08:22	09:34 (B22) 08:51 09:59 (B22)
	21:32	20:19	18:56	16:40	15:46	31 10:05 (B22) 15:46 8 10:07 (B22)
31	05:14	06:15		07:20	09:33 (B22)	08:51 09:58 (B22)
	21:30	20:17		16:38	09:53 (B22)	15:47 11 10:09 (B22)
Potential sun hours	529	469	385	324	247	216
Total, worst case				33	1111	293
Sun reduction				0.26	0.08	0.07
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.61	0.61	0.61
Total reduction				0.15	0.05	0.04
Total, real				5	55	12

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Strautini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (36)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	09:33 (B22) 17:48	07:11 19:53	06:49 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:17 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	09:35 (B22) 17:50	07:08 19:55	06:46 20:58	05:30 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	09:37 (B22) 17:52	07:06 19:57	06:43 21:00	05:28 21:55	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	09:39 (B22) 17:54	07:03 19:59	06:41 21:02	05:26 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	09:43 (B22) 17:56	07:01 19:58	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	09:48 (B22) 17:58	07:05 19:58	06:35 20:03	05:21 21:06	04:31 21:59	05:25 22:06	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	09:41 (B22) 17:59	07:03 19:59	06:33 20:05	05:19 21:08	04:36 22:00	05:27 21:15	06:29 20:08	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	09:30 (B22) 17:58	07:00 19:58	06:30 20:08	05:17 21:10	04:37 22:01	05:29 21:13	06:31 20:05	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	09:29 (B22) 17:56	06:58 20:10	06:28 21:12	05:15 22:02	04:38 22:03	05:31 21:11	06:33 20:03	07:34 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	09:28 (B22) 17:54	06:57 20:11	06:25 21:14	05:13 22:03	04:39 22:02	05:33 21:08	06:35 20:00	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	09:27 (B22) 17:52	06:56 20:14	06:22 21:16	05:11 22:04	04:41 22:01	05:35 21:06	06:37 20:06	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	09:26 (B22) 17:50	06:55 20:16	06:20 21:18	05:08 22:05	04:42 22:00	05:37 21:04	06:39 20:06	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	09:25 (B22) 17:47	06:54 20:18	06:17 21:20	05:06 22:06	04:43 21:59	05:39 21:02	06:41 20:02	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	09:24 (B22) 17:44	06:53 20:20	06:15 21:22	05:04 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	09:23 (B22) 17:43	06:52 20:22	06:12 21:24	05:03 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	09:22 (B22) 17:40	06:51 20:24	06:11 21:26	05:02 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	09:21 (B22) 17:38	06:50 20:26	06:10 21:27	05:01 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	09:20 (B22) 17:36	06:49 20:28	06:09 21:29	05:00 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:36 17:26	09:19 (B22) 17:32	06:48 20:30	06:08 21:31	04:59 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	09:18 (B22) 17:30	06:47 20:33	06:07 21:33	04:58 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	09:17 (B22) 17:28	06:46 20:35	06:06 21:35	04:57 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	09:16 (B22) 17:26	06:45 20:37	06:05 21:37	04:56 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	09:15 (B22) 17:24	06:44 20:39	06:04 21:38	04:55 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	09:14 (B22) 17:22	06:43 20:41	06:03 21:40	04:54 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	09:13 (B22) 17:20	06:42 20:43	06:02 21:42	04:53 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	09:12 (B22) 17:18	06:41 20:45	06:01 21:43	04:52 22:10	05:04 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	09:11 (B22) 17:16	06:40 20:47	06:00 21:45	04:51 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	09:10 (B22) 17:14	06:39 20:49	05:59 21:47	04:50 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:19 15:48	08:53 15:44
29	08:20 16:39	07:11 17:48	09:09 (B22) 17:12	06:38 20:51	05:58 21:48	04:49 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 15:47	08:55 15:45
30	08:19 16:41	07:09 17:50	09:08 (B22) 17:10	06:37 20:53	05:57 21:50	04:48 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:22 15:46	08:57 15:46
31	08:17 16:43	07:07 17:52	09:07 (B22) 17:09	06:36 20:54	05:56 21:51	04:47 22:07	05:14 21:30	06:15 20:17	07:17 17:20	08:19 16:38	08:24 15:47	08:59 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	632	77									615	102
Sun reduction	0.13	0.20									0.08	0.07
Oper. time red.	0.98	0.98									0.98	0.98
Wind dir. red.	0.60	0.60									0.60	0.60
Total reduction	0.08	0.12									0.05	0.04
Total, real	50	9									30	4

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Suš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (10)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48 43	10:50 (B17) 11:33 (B17) 16:45	08:15 07:11 17:47	07:11 06:49 19:53	05:32 20:55 21:53	04:35 22:09 21:28	04:30 20:14 18:53	05:15 16:36 16:36	06:17 07:17 07:23	07:17 07:23 07:25	07:23 07:25 07:25	08:24 15:45 43
2	08:51 15:49 43	10:51 (B17) 11:34 (B17) 16:47	08:13 07:08 17:50	07:08 06:46 19:55	05:30 20:57 21:54	04:34 22:09 21:26	04:30 20:11 18:51	05:17 16:34 16:34	06:19 07:19 07:25	07:19 07:25 07:25	07:25 07:25 07:25	08:26 15:44 43
3	08:50 15:50 43	10:51 (B17) 11:34 (B17) 16:49	08:11 07:06 17:52	07:06 06:43 19:57	05:28 21:00 21:55	04:33 22:08 21:24	04:31 20:09 18:48	05:19 16:31 16:31	06:21 07:21 07:27	07:21 07:27 07:29	07:27 07:29 07:29	08:28 15:43 43
4	08:50 15:52 43	10:51 (B17) 11:34 (B17) 16:52	08:09 07:03 17:54	07:03 06:41 19:59	05:25 21:02 21:57	04:32 22:07 21:22	04:32 20:06 18:45	05:25 16:29 16:29	06:23 07:23 07:29	07:23 07:29 07:31	07:29 07:31 07:31	08:29 15:42 43
5	08:49 15:53 43	10:52 (B17) 11:35 (B17) 16:54	08:07 07:00 17:56	07:00 06:38 20:01	05:23 21:04 21:58	04:31 22:07 21:19	04:33 20:03 18:43	05:23 16:27 16:27	06:25 07:25 07:31	07:25 07:31 07:33	07:31 07:33 07:33	08:31 15:41 43
6	08:49 15:54 43	10:53 (B17) 11:36 (B17) 16:56	08:05 07:58 17:58	06:58 06:35 20:03	05:21 21:06 21:59	04:30 22:06 21:17	04:34 20:01 18:40	05:25 16:25 16:25	06:27 07:27 07:33	07:27 07:33 07:36	07:33 07:36 07:36	08:32 15:41 43
7	08:48 15:56 43	10:53 (B17) 11:36 (B17) 16:58	08:03 07:58 18:00	06:55 06:33 20:05	05:19 21:08 22:00	04:30 22:05 21:15	04:35 20:01 18:38	05:27 16:23 16:23	06:29 07:29 07:38	07:29 07:36 07:38	07:36 07:38 07:38	08:34 15:40 43
8	08:48 15:58 43	10:53 (B17) 11:36 (B17) 17:01	08:00 07:58 18:02	06:53 06:30 20:07	05:17 21:10 22:01	04:29 22:04 21:13	04:37 20:05 18:35	05:29 16:21 16:21	06:31 07:31 07:34	07:31 07:38 07:40	07:38 07:40 07:40	08:35 15:39 43
9	08:47 15:59 43	10:54 (B17) 11:37 (B17) 17:03	07:58 07:56 18:05	06:50 06:27 20:10	05:14 21:12 22:02	04:28 22:03 21:11	04:38 20:03 18:32	05:31 16:19 16:19	06:33 07:34 07:40	07:34 07:40 07:42	07:40 07:42 07:42	08:37 15:39 43
10	08:46 16:01 43	10:54 (B17) 11:37 (B17) 17:05	07:56 07:54 18:07	06:47 06:25 20:12	05:12 21:14 22:03	04:28 22:03 21:11	04:39 20:03 18:30	05:33 16:17 16:17	06:35 07:36 07:44	07:36 07:42 07:44	07:42 07:44 07:44	08:38 15:38 43
11	08:45 16:02 43	10:55 (B17) 11:38 (B17) 17:07	07:54 07:52 18:09	06:45 06:22 20:14	05:10 21:16 22:04	04:27 22:02 21:06	04:40 20:01 18:27	05:35 16:15 16:15	06:37 07:38 07:46	07:38 07:44 07:46	07:44 07:46 07:46	08:39 15:38 43
12	08:44 16:04 43	10:55 (B17) 11:38 (B17) 17:10	07:52 07:49 18:11	06:42 06:19 20:16	05:08 21:18 22:05	04:26 22:01 21:04	04:42 20:01 18:24	05:37 16:13 16:13	06:39 07:40 07:48	07:40 07:46 07:48	07:46 07:48 07:48	08:40 15:38 43
13	08:43 16:06 42	10:56 (B17) 11:39 (B17) 17:12	07:49 07:47 18:13	06:39 06:17 20:18	05:06 21:20 22:06	04:26 22:01 21:01	04:43 20:01 18:22	05:39 16:11 16:11	06:41 07:42 07:51	07:42 07:49 07:51	07:49 07:51 07:51	08:42 15:38 42
14	08:42 16:08 42	10:56 (B17) 11:39 (B17) 17:14	07:47 07:45 18:15	06:37 06:14 20:20	05:04 21:22 22:07	04:26 22:01 21:01	04:44 20:01 18:22	05:41 16:09 16:09	06:43 07:44 07:53	07:44 07:51 07:53	07:51 07:53 07:53	08:43 15:38 43
15	08:41 16:10 42	10:57 (B17) 11:40 (B17) 17:16	07:45 07:43 18:17	06:34 06:12 20:22	05:02 21:24 22:07	04:25 22:01 21:01	04:46 20:01 18:22	05:43 16:07 16:07	06:45 07:46 07:55	07:46 07:53 07:55	07:53 07:55 07:55	08:44 15:37 43
16	08:40 16:12 41	10:58 (B17) 11:41 (B17) 17:19	07:43 07:41 18:19	06:31 06:09 20:24	05:00 21:26 22:08	04:25 22:01 21:01	04:47 20:01 18:24	05:45 16:06 16:06	06:47 07:48 07:57	07:48 07:55 07:57	07:55 07:57 07:57	08:45 15:37 42
17	08:39 16:13 40	10:59 (B17) 11:42 (B17) 17:21	07:40 07:38 18:22	06:29 06:07 20:26	04:58 21:27 22:09	04:25 22:01 21:01	04:49 20:01 18:25	05:47 16:06 16:06	06:49 07:50 07:59	07:50 07:57 07:59	07:57 07:59 07:59	08:46 15:38 42
18	08:37 16:15 39	10:59 (B17) 11:43 (B17) 17:23	07:38 07:36 18:24	06:26 06:04 20:28	04:57 21:29 22:11	04:25 22:01 21:01	04:51 20:01 18:26	05:49 16:07 16:07	06:51 07:52 08:01	07:52 07:59 08:01	07:59 08:01 08:01	08:47 15:38 42
19	08:36 16:17 39	10:59 (B17) 11:43 (B17) 17:25	07:35 07:33 18:26	06:23 06:01 20:30	04:55 21:31 22:13	04:25 22:01 21:01	04:52 20:01 18:27	05:51 16:07 16:07	06:53 07:54 08:03	07:54 08:01 08:03	08:01 08:03 08:03	08:47 15:38 42
20	08:35 16:19 37	11:01 (B17) 11:44 (B17) 17:28	07:33 07:31 18:28	06:21 06:00 20:32	04:53 21:33 22:15	04:25 22:01 21:01	04:54 20:01 18:28	05:53 16:07 16:07	06:55 07:57 08:05	07:57 08:03 08:05	08:03 08:05 08:05	08:48 15:38 42
21	08:33 16:21 37	11:01 (B17) 11:44 (B17) 17:30	07:31 07:29 18:30	06:18 06:00 20:35	04:51 21:35 22:17	04:25 22:01 21:01	04:55 20:01 18:29	05:55 16:07 16:07	06:57 07:59 08:07	07:59 08:05 08:07	08:05 08:07 08:07	08:49 15:39 42
22	08:32 16:23 35	11:02 (B17) 11:45 (B17) 17:32	07:28 07:26 18:32	06:15 06:00 20:37	04:50 21:37 22:19	04:25 22:01 21:01	04:57 20:01 18:30	05:57 16:07 16:07	06:59 08:01 08:09	08:01 08:07 08:09	08:07 08:09 08:09	08:49 15:39 42
23	08:30 16:26 33	11:03 (B17) 11:46 (B17) 17:34	07:26 07:24 18:34	06:13 06:00 20:39	04:48 21:38 22:21	04:25 22:01 21:01	04:59 20:01 18:31	05:59 16:07 16:07	07:01 08:03 08:11	08:03 08:09 08:11	08:09 08:11 08:11	08:50 15:40 42
24	08:29 16:28 31	11:05 (B17) 11:48 (B17) 17:36	07:23 07:21 18:36	06:10 06:00 20:41	04:46 21:40 22:23	04:26 22:01 21:01	05:01 20:01 18:32	06:01 16:07 16:07	07:03 08:05 08:13	08:05 08:11 08:13	08:11 08:13 08:13	08:51 15:40 42
25	08:27 16:30 30	11:06 (B17) 11:49 (B17) 17:39	07:21 07:19 18:38	06:07 06:00 20:43	04:45 21:42 22:25	04:26 22:01 21:01	05:02 20:01 18:33	06:03 16:07 16:07	07:05 08:07 08:15	08:07 08:13 08:15	08:13 08:15 08:15	08:51 15:41 42
26	08:26 16:32 27	11:07 (B17) 11:50 (B17) 17:41	07:18 07:16 18:40	06:05 06:00 20:45	04:43 21:44 22:27	04:26 22:01 21:01	05:04 20:01 18:34	06:05 16:07 16:07	07:07 08:09 08:17	08:09 08:15 08:17	08:15 08:17 08:17	08:51 15:42 43
27	08:24 16:34 24	11:09 (B17) 11:52 (B17) 17:43	07:16 07:14 18:42	06:02 06:00 20:47	04:42 21:45 22:29	04:27 22:01 21:01	05:06 20:01 18:35	06:07 16:07 16:07	07:09 08:11 08:19	08:11 08:17 08:19	08:17 08:19 08:19	08:51 15:42 42
28	08:22 16:36 20	11:11 (B17) 11:54 (B17) 17:45	07:13 07:11 18:45	05:59 06:00 20:49	04:41 21:47 22:31	04:28 22:01 21:01	05:08 20:01 18:36	06:09 16:07 16:07	07:11 08:13 08:21	08:13 08:19 08:21	08:19 08:21 08:21	08:51 15:43 43
29	08:20 16:38 15	11:14 (B17) 11:57 (B17) 17:47	07:13 07:11 18:47	05:59 06:00 20:51	04:41 21:49 22:33	04:28 22:01 21:01	05:10 20:01 18:37	06:11 16:07 16:07	07:13 08:15 08:23	08:15 08:21 08:23	08:21 08:23 08:23	08:51 15:44 42
30	08:18 16:41 5	11:19 (B17) 12:02 (B17) 17:49	07:13 07:11 18:49	05:59 06:00 20:53	04:41 21:51 22:35	04:28 22:01 21:01	05:12 20:01 18:38	06:13 16:07 16:07	07:15 08:17 08:25	08:17 08:23 08:25	08:23 08:25 08:25	08:51 15:45 43
31	08:17 16:43	11:24 (B17)	07:13	05:59	06:00	04:28	05:12	06:13	07:15	08:17	08:25	08:51
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	1093											1320
Sun reduction	0.13											0.07
Oper. time red.	0.98											0.98
Wind dir. red.	0.60											0.60
Total reduction	0.08											0.04
Total, real	85											55

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Sipolini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (86)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	06:47 (B14) 18:54	07:17 16:36	07:23 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	06:49 (B14) 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	06:54 (B14) 18:48	07:21 16:32	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:03	07:52 17:08	06:42 18:09	06:20 20:14	05:09 21:16	04:27 22:04	04:42 22:01	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:10	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:12	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:14	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	06:57 18:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:16	08:21 15:47	08:51 15:45
30	08:19 16:41	07:09 17:49	06:54 18:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:18	08:22 15:46	08:51 15:46
31	08:17 16:43	07:07 17:51	06:52 18:51	05:34 20:54	04:37 21:51	04:37 21:51	05:14 20:17	06:15 20:17	07:17 18:56	08:20 17:20	08:26 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case				388				364	30			
Sun reduction				0.50				0.50	0.43			
Oper. time red.				0.98				0.98	0.98			
Wind dir. red.				0.66				0.66	0.66			
Total reduction				0.32				0.32	0.27			
Total, real				125				117	8			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Turaiki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (162)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April	May	June
1	08:51		09:47 (B14)	08:15		07:11				06:49	05:33	04:36
	15:48	27	10:14 (B14)	16:45		17:48				19:53	20:55	21:53
2	08:50		09:48 (B14)	08:13		07:08				06:46	05:30	04:35
	15:49	28	10:16 (B14)	16:48		17:50				19:55	20:58	21:54
3	08:50		09:47 (B14)	08:11		07:06				06:43	05:28	04:34
	15:51	29	10:16 (B14)	16:50		17:52				19:57	21:00	21:55
4	08:50		09:47 (B14)	08:09		07:03				06:41	05:26	04:33
	15:52	29	10:16 (B14)	16:52		17:54				19:59	21:02	21:57
5	08:49		09:48 (B14)	08:07		07:01				06:38	05:23	04:32
	15:53	29	10:17 (B14)	16:54		17:56				20:01	21:04	21:58
6	08:49		09:48 (B14)	08:05		06:58				06:36	05:21	04:31
	15:55	30	10:18 (B14)	16:56		17:58				20:03	21:06	21:59
7	08:48		09:49 (B14)	08:03		06:55				06:33	05:19	04:30
	15:56	29	10:18 (B14)	16:59		18:01				20:06	21:08	22:00
8	08:48		09:49 (B14)	08:01		06:53				06:30	05:17	04:29
	15:58	30	10:19 (B14)	17:01		18:03				20:08	21:10	22:01
9	08:47		09:49 (B14)	07:58		06:50				06:28	05:15	04:29
	16:00	30	10:19 (B14)	17:03		18:05				20:10	21:12	22:02
10	08:46		09:49 (B14)	07:56		06:47				06:25	05:13	04:28
	16:01	31	10:20 (B14)	17:05		18:07				20:12	21:14	22:03
11	08:45		09:50 (B14)	07:54		06:45				06:22	05:11	04:27
	16:03	30	10:20 (B14)	17:08		18:09				20:14	21:16	22:04
12	08:44		09:50 (B14)	07:52		06:42			07:12 (B22)	06:20	05:09	04:27
	16:05	31	10:21 (B14)	17:10		18:11		7	07:19 (B22)	20:16	21:18	22:05
13	08:43		09:50 (B14)	07:50		06:40			07:07 (B22)	06:17	05:07	04:26
	16:06	31	10:21 (B14)	17:12		18:13		15	07:22 (B22)	20:18	21:20	22:06
14	08:42		09:51 (B14)	07:47		06:37			07:05 (B22)	06:15	05:05	04:26
	16:08	30	10:21 (B14)	17:14		18:15		19	07:24 (B22)	20:20	21:22	22:07
15	08:41		09:52 (B14)	07:45		06:34			07:04 (B22)	06:12	05:03	04:26
	16:10	30	10:22 (B14)	17:17		18:18		22	07:26 (B22)	20:22	21:24	22:07
16	08:40		09:52 (B14)	07:43		06:32			07:02 (B22)	06:09	05:01	04:26
	16:12	30	10:22 (B14)	17:19		18:20		24	07:26 (B22)	20:24	21:26	22:08
17	08:39		09:53 (B14)	07:40		06:29			07:00 (B22)	06:07	04:59	04:25
	16:14	30	10:23 (B14)	17:21		18:22		27	07:27 (B22)	20:26	21:27	22:08
18	08:38		09:53 (B14)	07:38		06:26			06:59 (B22)	06:04	04:57	04:25
	16:16	29	10:22 (B14)	17:23		18:24		28	07:27 (B22)	20:28	21:29	22:09
19	08:36		09:53 (B14)	07:36		06:24			06:59 (B22)	06:02	04:55	04:25
	16:18	29	10:22 (B14)	17:26		18:26		28	07:27 (B22)	20:31	21:31	22:09
20	08:35		09:54 (B14)	07:33		06:21			06:58 (B22)	05:59	04:53	04:25
	16:20	29	10:23 (B14)	17:28		18:28		29	07:27 (B22)	20:33	21:33	22:10
21	08:33		09:55 (B14)	07:31		06:18			06:58 (B22)	05:57	04:52	04:25
	16:22	27	10:22 (B14)	17:30		18:30		28	07:26 (B22)	20:35	21:35	22:10
22	08:32		09:55 (B14)	07:28		06:16			06:58 (B22)	05:54	04:50	04:26
	16:24	27	10:22 (B14)	17:32		18:32		29	07:27 (B22)	20:37	21:37	22:10
23	08:30		09:56 (B14)	07:26		06:13			06:58 (B22)	05:52	04:48	04:26
	16:26	25	10:21 (B14)	17:34		18:34		28	07:26 (B22)	20:39	21:38	22:10
24	08:29		09:58 (B14)	07:23		06:10			06:58 (B22)	05:49	04:47	04:26
	16:28	23	10:21 (B14)	17:37		18:36		27	07:25 (B22)	20:41	21:40	22:10
25	08:27		09:59 (B14)	07:21		06:08			06:59 (B22)	05:47	04:45	04:26
	16:30	22	10:21 (B14)	17:39		18:38		25	07:24 (B22)	20:43	21:42	22:10
26	08:26		10:00 (B14)	07:18		06:05			06:59 (B22)	05:44	04:44	04:27
	16:32	20	10:20 (B14)	17:41		18:41		24	07:23 (B22)	20:45	21:43	22:10
27	08:24		10:02 (B14)	07:16		06:02			07:00 (B22)	05:42	04:42	04:27
	16:34	16	10:18 (B14)	17:43		18:43		21	07:21 (B22)	20:47	21:45	22:10
28	08:22		10:04 (B14)	07:13		05:59			07:02 (B22)	05:40	04:41	04:28
	16:37	12	10:16 (B14)	17:45		18:45		17	07:19 (B22)	20:49	21:47	22:10
29	08:20		10:09 (B14)			06:57			08:04 (B22)	05:37	04:40	04:29
	16:39	3	10:12 (B14)			19:47		12	08:16 (B22)	20:51	21:48	22:10
30	08:19					06:54				05:35	04:38	04:29
	16:41					19:49				20:53	21:50	22:09
31	08:17					06:51					04:37	
	16:43					19:51					21:51	
Potential sun hours	235			266		366			426		508	529
Total, worst case		766				410						
Sun reduction		0.13				0.41						
Oper. time red.		0.98				0.98						
Wind dir. red.		0.61				0.63						
Total reduction		0.08				0.25						
Total, real		60				103						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Turaiki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (162)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:49 (B22) 08:00 (B22)	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:46 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:50 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 16:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 16:48	08:17 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 16:45	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 16:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			403	11	443	851
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.63	0.63	0.61	0.61
Total reduction			0.26	0.16	0.05	0.04
Total, real			105	2	22	35

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Tireli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (99)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:41 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:37	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Tudalinas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (42)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		10:28 (B22)	08:15		07:11	06:49			05:32		06:18 (B1)	04:36					
	15:48	35	11:03 (B22)	16:45		17:48	19:53			20:55	20	06:38 (B1)	21:53					
2	08:50		10:29 (B22)	08:13		07:08	06:46			05:30		06:19 (B1)	04:35					
	15:49	35	11:04 (B22)	16:47		17:50	19:55			20:57	18	06:37 (B1)	21:54					
3	08:50		10:29 (B22)	08:11		07:06	06:43			05:28		06:20 (B1)	04:34					
	15:51	35	11:04 (B22)	16:50		17:52	19:57			21:00	16	06:36 (B1)	21:55					
4	08:50		10:29 (B22)	08:09		07:03	06:41			05:26		06:21 (B1)	04:33					
	15:52	35	11:04 (B22)	16:52		17:54	19:59			21:02	13	06:34 (B1)	21:57					
5	08:49		10:30 (B22)	08:07		07:00	06:38			05:23		06:23 (B1)	04:32					
	15:53	35	11:05 (B22)	16:54		17:56	20:01			21:04	9	06:32 (B1)	21:58					
6	08:49		10:31 (B22)	08:05		06:58	06:35			05:21			04:31					
	15:55	34	11:05 (B22)	16:56		17:58	20:03			21:06			21:59					
7	08:48		10:31 (B22)	08:03		06:55	06:33			05:19			04:30					
	15:56	34	11:05 (B22)	16:59		18:00	20:05			21:08			22:00					
8	08:48		10:32 (B22)	08:01		06:53	06:30			05:17			04:29					
	15:58	34	11:06 (B22)	17:01		18:03	20:08			21:10			22:01					
9	08:47		10:32 (B22)	07:58		06:50	06:28			05:15			04:28					
	15:59	34	11:06 (B22)	17:03		18:05	20:10			21:12			22:02					
10	08:46		10:33 (B22)	07:56		06:47	06:25			05:13			04:28					
	16:01	33	11:06 (B22)	17:05		18:07	20:12			21:14			22:03					
11	08:45		10:34 (B22)	07:54		06:45	06:22			05:10			04:27					
	16:03	32	11:06 (B22)	17:08		18:09	20:14			21:16			22:04					
12	08:44		10:34 (B22)	07:52		06:42	06:20			05:08			04:27					
	16:04	33	11:07 (B22)	17:10		18:11	20:16			21:18			22:05					
13	08:43		10:34 (B22)	07:50		06:40	06:17			05:06			04:26					
	16:06	32	11:06 (B22)	17:12		18:13	20:18			21:20			22:06					
14	08:42		10:36 (B22)	07:47		06:37	06:14			05:04			04:26					
	16:08	30	11:06 (B22)	17:14		18:15	20:20			21:22			22:07					
15	08:41		10:37 (B22)	07:45		06:34	06:12			05:02			04:26					
	16:10	30	11:07 (B22)	17:17		18:18	20:22			21:24			22:07					
16	08:40		10:37 (B22)	07:43		06:32	06:09			05:01			04:25					
	16:12	29	11:06 (B22)	17:19		18:20	20:24			21:25			22:08					
17	08:39		10:38 (B22)	07:40		06:29	06:07			04:59			04:25					
	16:14	28	11:06 (B22)	17:21		18:22	20:26			21:27			22:08					
18	08:37		10:39 (B22)	07:38		06:26	06:04			04:57			04:25					
	16:16	26	11:05 (B22)	17:23		18:24	20:28			21:29			22:09					
19	08:36		10:40 (B22)	07:36		06:24	06:02		06:28 (B1)	04:55			04:25					
	16:18	24	11:04 (B22)	17:25		18:26	20:30	7	06:35 (B1)	21:31			22:09					
20	08:35		10:42 (B22)	07:33		06:21	05:59		06:25 (B1)	04:53			04:25					
	16:20	22	11:04 (B22)	17:28		18:28	20:33	12	06:37 (B1)	21:33			22:10					
21	08:33		10:43 (B22)	07:31		06:18	05:57		06:23 (B1)	04:52			04:25					
	16:22	20	11:03 (B22)	17:30		18:30	20:35	16	06:39 (B1)	21:35			22:10					
22	08:32		10:45 (B22)	07:28		06:16	05:54		06:21 (B1)	04:50			04:25					
	16:24	16	11:01 (B22)	17:32		18:32	20:37	19	06:40 (B1)	21:37			22:10					
23	08:30		10:47 (B22)	07:26		06:13	05:52		06:19 (B1)	04:48			04:26					
	16:26	12	10:59 (B22)	17:34		18:34	20:39	21	06:40 (B1)	21:38			22:10					
24	08:29		10:53 (B22)	07:23		06:10	05:49		06:18 (B1)	04:47			04:26					
	16:28	2	10:55 (B22)	17:37		18:36	20:41	22	06:40 (B1)	21:40			22:10					
25	08:27			07:21		06:07	05:47		06:18 (B1)	04:45			04:26					
	16:30			17:39		18:38	20:43	23	06:41 (B1)	21:42			22:10					
26	08:26			07:18		06:05	05:44		06:17 (B1)	04:44			04:27					
	16:32			17:41		18:41	20:45	23	06:40 (B1)	21:43			22:10					
27	08:24			07:16		06:02	05:42		06:17 (B1)	04:42			04:27					
	16:34			17:43		18:43	20:47	23	06:40 (B1)	21:45			22:10					
28	08:22			07:13		05:59	05:40		06:17 (B1)	04:41			04:28					
	16:36			17:45		18:45	20:49	23	06:40 (B1)	21:47			22:10					
29	08:20					06:57	05:37		06:18 (B1)	04:39			04:28					
	16:39					19:47	20:51	22	06:40 (B1)	21:48			22:10					
30	08:18					06:54	05:35		06:17 (B1)	04:38			04:29					
	16:41					19:49	20:53	21	06:38 (B1)	21:50			22:09					
31	08:17					06:51				04:37								
	16:43					19:51				21:51								
Potential sun hours	235			266		366		426		508			529					
Total, worst case	680							232		76								
Sun reduction	0.13							0.50		0.57								
Oper. time red.	0.98							0.98		0.98								
Wind dir. red.	0.61							0.65		0.65								
Total reduction	0.08							0.31		0.35								
Total, real	53							72		27								

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Tudalinas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (42)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45 32 10:48 (B22)
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44 33 10:49 (B22)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43 34 10:49 (B22)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42 34 10:50 (B22)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42 34 10:50 (B22)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41 34 10:51 (B22)
7	04:36 22:05	05:27 21:15	06:35 (B1) 06:39 (B1)	06:29 19:58	07:30 18:38	07:36 16:23 35 10:51 (B22)
8	04:37 22:04	05:29 21:13	06:32 (B1) 06:42 (B1)	06:31 19:55	07:32 18:35	07:38 16:21 35 10:52 (B22)
9	04:38 22:03	05:31 21:11	06:30 (B1) 06:44 (B1)	06:33 19:53	07:34 18:32	07:40 16:19 35 10:52 (B22)
10	04:39 22:02	05:33 21:08	06:29 (B1) 06:46 (B1)	06:35 19:50	07:36 18:30	07:42 16:17 35 10:53 (B22)
11	04:41 22:01	05:35 21:06	06:27 (B1) 06:46 (B1)	06:37 19:47	07:38 18:27	07:44 16:15 35 10:53 (B22)
12	04:42 22:00	05:37 21:04	06:26 (B1) 06:46 (B1)	06:39 19:45	07:40 18:25	07:46 16:13 35 10:54 (B22)
13	04:43 21:59	05:39 21:02	06:26 (B1) 06:47 (B1)	06:41 19:42	07:42 18:22	07:49 16:11 35 10:54 (B22)
14	04:45 21:58	05:41 20:59	06:25 (B1) 06:47 (B1)	06:43 19:39	07:44 18:19	07:51 16:09 35 10:55 (B22)
15	04:46 21:57	05:43 20:57	06:25 (B1) 06:48 (B1)	06:45 19:37	07:46 18:17	07:53 16:08 35 10:55 (B22)
16	04:48 21:55	05:45 20:54	06:25 (B1) 06:48 (B1)	06:47 19:34	07:48 18:14	07:55 16:06 36 10:56 (B22)
17	04:49 21:54	05:47 20:52	06:25 (B1) 06:48 (B1)	06:49 19:31	07:50 18:12	07:57 16:04 35 10:56 (B22)
18	04:51 21:52	05:49 20:50	06:24 (B1) 06:46 (B1)	06:51 19:29	07:52 18:09	07:59 16:02 2 10:27 (B22) 15:38 35 10:57 (B22)
19	04:52 21:51	05:51 20:47	06:24 (B1) 06:46 (B1)	06:53 19:26	07:55 18:07	08:01 16:01 12 10:29 (B22) 15:38 35 10:57 (B22)
20	04:54 21:49	05:53 20:45	06:25 (B1) 06:45 (B1)	06:55 19:23	07:57 18:04	08:03 15:59 16 10:36 (B22) 15:39 35 10:57 (B22)
21	04:56 21:48	05:55 20:42	06:26 (B1) 06:44 (B1)	06:57 19:20	07:59 18:02	08:05 15:58 20 10:38 (B22) 15:39 35 10:58 (B22)
22	04:57 21:46	05:57 20:40	06:28 (B1) 06:43 (B1)	06:59 19:18	08:01 17:59	08:07 15:56 22 10:40 (B22) 15:39 35 10:58 (B22)
23	04:59 21:45	05:59 20:37	06:30 (B1) 06:41 (B1)	07:01 19:15	08:03 17:57	08:09 15:55 24 10:41 (B22) 15:40 35 10:59 (B22)
24	05:01 21:43	06:01 20:35	06:32 (B1) 06:39 (B1)	07:03 19:12	08:05 17:55	08:11 15:53 26 10:42 (B22) 15:41 35 10:59 (B22)
25	05:03 21:41	06:03 20:32		07:05 19:10	08:13 16:52	10:16 (B22) 15:41 35 11:00 (B22)
26	05:04 21:39	06:05 20:30		07:07 19:07	08:15 16:50	10:16 (B22) 15:42 35 11:00 (B22)
27	05:06 21:38	06:07 20:27		07:09 19:04	08:17 16:47	10:16 (B22) 15:43 35 11:00 (B22)
28	05:08 21:36	06:09 20:24		07:11 19:02	08:19 16:45	10:16 (B22) 15:44 35 11:01 (B22)
29	05:10 21:34	06:11 20:22		07:13 18:59	08:21 16:43	10:16 (B22) 15:45 35 11:01 (B22)
30	05:12 21:32	06:13 20:19		07:15 18:56	08:22 16:40	10:16 (B22) 15:46 35 11:02 (B22)
31	05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47 35 11:03 (B22)
Potential sun hours	529	469	385	324	247	216
Total, worst case		311			301	1077
Sun reduction		0.50			0.08	0.07
Oper. time red.		0.98			0.98	0.98
Wind dir. red.		0.65			0.61	0.61
Total reduction		0.31			0.05	0.04
Total, real		96			14	44

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Tujas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (89)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	05:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Upenes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (80)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
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7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
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11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
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18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Uplejas (kad. apz. 56760080007) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (25)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:47	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:34 15:40
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9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 18:16	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:44 15:37
17	08:39 16:13	07:40 17:21	06:28 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:03	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:24 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:20 18:28	05:59 20:32	04:53 21:33	04:24 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:40	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:50 15:41
27	08:24 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:21	07:13 18:59	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Uplejas (kad. apz. 56960040385) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (66)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January		February		March	April	May	June
1	08:51	09:57 (B22)	08:15	09:51 (B22)	07:11	06:49	05:33	04:36
	15:48	9 10:06 (B22)	16:45	40 10:31 (B22)	17:48	19:53	20:55	21:53
2	08:50	09:57 (B22)	08:13	09:52 (B22)	07:08	06:46	05:30	04:35
	15:49	11 10:08 (B22)	16:47	39 10:31 (B22)	17:50	19:55	20:57	21:54
3	08:50	09:55 (B22)	08:11	09:52 (B22)	07:06	06:43	05:28	04:34
	15:51	14 10:09 (B22)	16:50	39 10:31 (B22)	17:52	19:57	21:00	21:55
4	08:50	09:54 (B22)	08:09	09:53 (B22)	07:03	06:41	05:26	04:33
	15:52	16 10:10 (B22)	16:52	38 10:31 (B22)	17:54	19:59	21:02	21:57
5	08:49	09:54 (B22)	08:07	09:54 (B22)	07:00	06:38	05:23	04:32
	15:53	19 10:13 (B22)	16:54	37 10:31 (B22)	17:56	20:01	21:04	21:58
6	08:49	09:54 (B22)	08:05	09:54 (B22)	06:58	06:35	05:21	04:31
	15:55	20 10:14 (B22)	16:56	35 10:29 (B22)	17:58	20:03	21:06	21:59
7	08:48	09:53 (B22)	08:03	09:56 (B22)	06:55	06:33	05:19	04:30
	15:56	22 10:15 (B22)	16:59	33 10:29 (B22)	18:00	20:05	21:08	22:00
8	08:48	09:52 (B22)	08:01	09:57 (B22)	06:53	06:30	05:17	04:29
	15:58	24 10:16 (B22)	17:01	31 10:28 (B22)	18:03	20:08	21:10	22:01
9	08:47	09:52 (B22)	07:58	09:58 (B22)	06:50	06:28	05:15	04:28
	15:59	25 10:17 (B22)	17:03	28 10:26 (B22)	18:05	20:10	21:12	22:02
10	08:46	09:52 (B22)	07:56	10:00 (B22)	06:47	06:25	05:13	04:28
	16:01	27 10:19 (B22)	17:05	24 10:24 (B22)	18:07	20:12	21:14	22:03
11	08:45	09:52 (B22)	07:54	10:03 (B22)	06:45	06:22	05:11	04:27
	16:03	28 10:20 (B22)	17:08	20 10:23 (B22)	18:09	20:14	21:16	22:04
12	08:44	09:52 (B22)	07:52	10:05 (B22)	06:42	06:20	05:08	04:27
	16:04	29 10:21 (B22)	17:10	14 10:19 (B22)	18:11	20:16	21:18	22:05
13	08:43	09:51 (B22)	07:49		06:40	06:17	05:06	04:26
	16:06	31 10:22 (B22)	17:12		18:13	20:18	21:20	22:06
14	08:42	09:51 (B22)	07:47		06:37	06:14	05:04	04:26
	16:08	32 10:23 (B22)	17:14		18:15	20:20	21:22	22:07
15	08:41	09:50 (B22)	07:45		06:34	06:12	05:03	04:26
	16:10	33 10:23 (B22)	17:17		18:18	20:22	21:24	22:07
16	08:40	09:50 (B22)	07:43		06:32	06:09	05:01	04:25
	16:12	35 10:25 (B22)	17:19		18:20	20:24	21:25	22:08
17	08:39	09:50 (B22)	07:40		06:29	06:07	04:59	04:25
	16:14	36 10:26 (B22)	17:21		18:22	20:26	21:27	22:08
18	08:37	09:50 (B22)	07:38		06:26	06:04	04:57	04:25
	16:16	36 10:26 (B22)	17:23		18:24	20:28	21:29	22:09
19	08:36	09:49 (B22)	07:36		06:24	06:02	04:55	04:25
	16:18	38 10:27 (B22)	17:26		18:26	20:30	21:31	22:09
20	08:35	09:50 (B22)	07:33		06:21	05:59	04:53	04:25
	16:20	38 10:28 (B22)	17:28		18:28	20:33	21:33	22:10
21	08:33	09:50 (B22)	07:31		06:18	05:57	04:52	04:25
	16:22	39 10:29 (B22)	17:30		18:30	20:35	21:35	22:10
22	08:32	09:49 (B22)	07:28		06:16	05:54	04:50	04:25
	16:24	40 10:29 (B22)	17:32		18:32	20:37	21:37	22:10
23	08:30	09:49 (B22)	07:26		06:13	05:52	04:48	04:26
	16:26	40 10:29 (B22)	17:34		18:34	20:39	21:38	22:10
24	08:29	09:50 (B22)	07:23		06:10	05:49	04:47	04:26
	16:28	41 10:31 (B22)	17:37		18:36	20:41	21:40	22:10
25	08:27	09:50 (B22)	07:21		06:07	05:47	04:45	04:26
	16:30	41 10:31 (B22)	17:39		18:38	20:43	21:42	22:10
26	08:26	09:50 (B22)	07:18		06:05	05:44	04:44	04:27
	16:32	41 10:31 (B22)	17:41		18:41	20:45	21:43	22:10
27	08:24	09:50 (B22)	07:16		06:02	05:42	04:42	04:27
	16:34	42 10:32 (B22)	17:43		18:43	20:47	21:45	22:10
28	08:22	09:50 (B22)	07:13		05:59	05:40	04:41	04:28
	16:36	42 10:32 (B22)	17:45		18:45	20:49	21:47	22:10
29	08:20	09:51 (B22)			06:57	05:37	04:40	04:29
	16:39	41 10:32 (B22)			19:47	20:51	21:48	22:10
30	08:18	09:51 (B22)			06:54	05:35	04:38	04:29
	16:41	41 10:32 (B22)			19:49	20:53	21:50	22:09
31	08:17	09:51 (B22)			06:51		04:37	
	16:43	41 10:32 (B22)			19:51		21:51	
Potential sun hours	235		266		366	426	508	529
Total, worst case		972		378				
Sun reduction		0.13		0.20				
Oper. time red.		0.98		0.98				
Wind dir. red.		0.61		0.61				
Total reduction		0.08		0.12				
Total, real		77		45				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Uplejas (kad. apz. 56960040385) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (66)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	09:29 (B22) 09:54 (B22)	08:24 15:45	09:34 (B22) 10:02 (B22)
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	09:27 (B22) 09:56 (B22)	08:26 15:44	09:35 (B22) 10:02 (B22)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	09:27 (B22) 09:58 (B22)	08:28 15:43	09:35 (B22) 10:01 (B22)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	09:25 (B22) 09:58 (B22)	08:29 15:42	09:37 (B22) 10:00 (B22)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	09:24 (B22) 09:59 (B22)	08:31 15:42	09:38 (B22) 10:00 (B22)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	09:24 (B22) 10:00 (B22)	08:32 15:41	09:40 (B22) 10:00 (B22)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	09:23 (B22) 10:01 (B22)	08:34 15:40	09:40 (B22) 09:59 (B22)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	09:23 (B22) 10:02 (B22)	08:35 15:40	09:42 (B22) 09:59 (B22)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	09:22 (B22) 10:02 (B22)	08:37 15:39	09:43 (B22) 09:57 (B22)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	09:23 (B22) 10:03 (B22)	08:38 15:39	09:45 (B22) 09:57 (B22)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	09:22 (B22) 10:03 (B22)	08:39 15:38	09:47 (B22) 09:56 (B22)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	09:22 (B22) 10:03 (B22)	08:40 15:38	09:50 (B22) 09:55 (B22)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	09:23 (B22) 10:04 (B22)	08:42 15:38	
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	09:22 (B22) 10:04 (B22)	08:43 15:38	
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	09:22 (B22) 10:03 (B22)	08:44 15:38	
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	09:23 (B22) 10:04 (B22)	08:45 15:38	
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	09:23 (B22) 10:04 (B22)	08:46 15:38	
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	09:24 (B22) 10:05 (B22)	08:46 15:38	
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	09:24 (B22) 10:04 (B22)	08:47 15:38	
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	09:24 (B22) 10:04 (B22)	08:48 15:39	
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	09:25 (B22) 10:04 (B22)	08:48 15:39	
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	09:26 (B22) 10:04 (B22)	08:49 15:39	
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	09:26 (B22) 10:04 (B22)	08:50 15:40	
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	09:27 (B22) 10:04 (B22)	08:50 15:41	
25	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	09:27 (B22) 10:03 (B22)	08:50 15:41	
26	05:04 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	09:28 (B22) 10:03 (B22)	08:51 15:42	
27	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	09:30 (B22) 10:03 (B22)	08:51 15:43	
28	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	09:31 (B22) 10:03 (B22)	08:51 15:44	
29	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	09:32 (B22) 10:03 (B22)	08:51 15:45	
30	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	09:33 (B22) 10:02 (B22)	08:51 15:46	
31	05:14 21:30	06:15 20:17		07:20 16:38	08:21 15:47		08:51 15:47	10:00 (B22) 10:02 (B22)
Potential sun hours	529	469	385	324	247		216	
Total, worst case				40	1103		224	
Sun reduction				0.26	0.08		0.07	
Oper. time red.				0.98	0.98		0.98	
Wind dir. red.				0.61	0.61		0.61	
Total reduction				0.15	0.05		0.04	
Total, real				6	54		9	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Upmalas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (215)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:04	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:58	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:51	06:49 19:31	07:50 18:12	07:56 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:42	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Upmales - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (146)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:47	15:57 (B22) 16:40 (B22)	06:49 19:53	05:32 20:55
2	08:50 15:49	08:13 16:47	07:08 17:50	15:57 (B22) 16:40 (B22)	06:46 19:55	05:30 20:57
3	08:50 15:51	08:11 16:50	07:06 17:52	15:57 (B22) 16:40 (B22)	06:43 19:57	05:28 20:59
4	08:50 15:52	08:09 16:52	07:03 17:54	15:57 (B22) 16:39 (B22)	06:41 19:59	05:26 21:01
5	08:49 15:53	08:07 16:54	07:00 17:56	15:57 (B22) 16:38 (B22)	06:38 20:01	05:23 21:04
6	08:49 15:55	08:05 16:56	06:58 17:58	15:58 (B22) 16:39 (B22)	06:35 20:03	05:21 21:06
7	08:48 15:56	08:03 16:59	06:55 18:00	15:58 (B22) 16:37 (B22)	06:33 20:05	05:19 21:08
8	08:47 15:58	08:00 17:01	06:53 18:03	15:58 (B22) 16:36 (B22)	06:30 20:07	05:17 21:10
9	08:47 15:59	07:58 17:03	06:50 18:05	15:59 (B22) 16:36 (B22)	06:27 20:10	05:15 21:12
10	08:46 16:01	07:56 17:05	06:47 18:07	16:00 (B22) 16:34 (B22)	06:25 20:12	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	16:01 (B22) 16:32 (B22)	06:22 20:14	05:10 21:16
12	08:44 16:04	07:52 17:10	06:42 18:11	16:03 (B22) 16:31 (B22)	06:20 20:16	05:08 21:18
13	08:43 16:06	07:49 17:12	06:39 18:13	16:05 (B22) 16:29 (B22)	06:17 20:18	05:06 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	16:07 (B22) 16:25 (B22)	06:14 20:20	05:04 21:22
15	08:41 16:10	07:45 17:17	06:34 18:17	16:11 (B22) 16:21 (B22)	06:12 20:22	05:02 21:23
16	08:40 16:12	07:43 17:19	06:31 18:20	06:09 20:24	21:25	05:38 (B4) 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	21:27	05:39 (B4) 22:08
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	21:29	05:38 (B4) 22:09
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	21:31	05:38 (B4) 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	21:33	05:38 (B4) 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	21:35	05:37 (B4) 22:10
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	21:36	05:38 (B4) 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	21:38	05:37 (B4) 22:10
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	21:40	05:38 (B4) 22:10
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	21:42	05:38 (B4) 22:10
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	21:43	05:39 (B4) 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	21:45	05:38 (B4) 22:10
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	21:46	05:39 (B4) 22:10
29	08:20 16:39		06:57 19:47	05:37 20:51	21:48	05:39 (B4) 22:10
30	08:18 16:41		06:54 19:49	05:35 20:53	21:50	05:40 (B4) 22:09
31	08:17 16:43		06:51 19:51		21:51	05:40 (B4) 22:09
Potential sun hours	235	266	366	426	508	529
Total, worst case		433	512		569	441
Sun reduction		0.20	0.41		0.57	0.56
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.67	0.67		0.67	0.67
Total reduction		0.13	0.27		0.37	0.37
Total, real		57	139		212	162

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Upmales - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (146)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November			December		
1	04:30	05:51 (B4)	05:16	05:52 (B4)	06:17		07:17	16:43 (B22)	07:22	08:24								
	22:09	15	06:06 (B4)	21:28	20	06:12 (B4)	20:14	18:54	27	17:10 (B22)	16:36	15:45						
2	04:31	05:51 (B4)	05:17	05:53 (B4)	06:19		07:19	16:40 (B22)	07:25	08:26								
	22:08	16	06:07 (B4)	21:26	18	06:11 (B4)	20:11	18:51	31	17:11 (B22)	16:34	15:44						
3	04:32	05:51 (B4)	05:19	05:55 (B4)	06:21		07:21	16:39 (B22)	07:27	08:27								
	22:08	17	06:08 (B4)	21:24	14	06:09 (B4)	20:09	18:48	33	17:12 (B22)	16:31	15:43						
4	04:33	05:51 (B4)	05:21	05:58 (B4)	06:23		07:23	16:37 (B22)	07:29	08:29								
	22:07	17	06:08 (B4)	21:22	9	06:07 (B4)	20:06	18:46	35	17:12 (B22)	16:29	15:42						
5	04:34	05:50 (B4)	05:23				06:25	07:25		16:35 (B22)	07:31	08:31						
	22:07	19	06:09 (B4)	21:19			20:03	18:43	38	17:13 (B22)	16:27	15:42						
6	04:35	05:50 (B4)	05:25				06:27	07:27		16:34 (B22)	07:33	08:32						
	22:06	20	06:10 (B4)	21:17			20:01	18:40	39	17:13 (B22)	16:25	15:41						
7	04:36	05:50 (B4)	05:27				06:29	07:29		16:33 (B22)	07:36	08:34						
	22:05	20	06:10 (B4)	21:15			19:58	18:38	40	17:13 (B22)	16:23	15:40						
8	04:37	05:50 (B4)	05:29				06:31	07:31		16:32 (B22)	07:38	08:35						
	22:04	21	06:11 (B4)	21:13			19:55	18:35	42	17:14 (B22)	16:21	15:40						
9	04:38	05:49 (B4)	05:31				06:33	07:34		16:31 (B22)	07:40	08:36						
	22:03	22	06:11 (B4)	21:11			19:53	18:32	42	17:13 (B22)	16:19	15:39						
10	04:39	05:49 (B4)	05:33				06:35	07:36		16:32 (B22)	07:42	08:38						
	22:02	23	06:12 (B4)	21:08			19:50	18:30	42	17:14 (B22)	16:17	15:39						
11	04:41	05:48 (B4)	05:35				06:37	07:38		16:31 (B22)	07:44	08:39						
	22:01	24	06:12 (B4)	21:06			19:47	18:27	43	17:14 (B22)	16:15	15:38						
12	04:42	05:49 (B4)	05:37				06:39	07:40		16:30 (B22)	07:46	08:40						
	22:00	24	06:13 (B4)	21:04			19:45	18:25	44	17:14 (B22)	16:13	15:38						
13	04:43	05:49 (B4)	05:39				06:41	07:42		16:30 (B22)	07:48	08:41						
	21:59	25	06:14 (B4)	21:01			19:42	18:22	43	17:13 (B22)	16:11	15:38						
14	04:45	05:48 (B4)	05:41				06:43	07:44		16:30 (B22)	07:51	08:43						
	21:58	26	06:14 (B4)	20:59			19:39	18:19	42	17:12 (B22)	16:09	15:38						
15	04:46	05:48 (B4)	05:43				06:45	07:46		16:31 (B22)	07:53	08:44						
	21:56	26	06:14 (B4)	20:57			19:37	18:17	42	17:13 (B22)	16:07	15:38	4	13:41 (B24)				
16	04:48	05:48 (B4)	05:45				06:47	07:48		16:31 (B22)	07:55	08:45						
	21:55	27	06:15 (B4)	20:54			19:34	18:14	41	17:12 (B22)	16:06	15:38	5	13:46 (B24)				
17	04:49	05:48 (B4)	05:47				06:49	07:50		16:31 (B22)	07:57	08:45						
	21:54	27	06:15 (B4)	20:52			19:31	18:12	40	17:11 (B22)	16:04	15:38	7	13:48 (B24)				
18	04:51	05:48 (B4)	05:49				06:51	07:52		16:31 (B22)	07:59	08:46						
	21:52	28	06:16 (B4)	20:49			19:28	18:09	39	17:10 (B22)	16:02	15:38	8	13:49 (B24)				
19	04:52	05:48 (B4)	05:51				06:53	07:54		16:31 (B22)	08:01	08:47						
	21:51	27	06:15 (B4)	20:47			19:26	18:07	38	17:09 (B22)	16:01	15:38	9	13:49 (B24)				
20	04:54	05:48 (B4)	05:53				06:55	07:57		16:33 (B22)	08:03	08:48						
	21:49	28	06:16 (B4)	20:45			19:23	18:04	35	17:08 (B22)	15:59	15:39	9	13:50 (B24)				
21	04:56	05:48 (B4)	05:55				06:57	07:59		16:33 (B22)	08:05	08:48						
	21:48	28	06:16 (B4)	20:42			19:20	18:02	34	17:07 (B22)	15:58	15:39	9	13:51 (B24)				
22	04:57	05:48 (B4)	05:57				06:59	08:01		16:34 (B22)	08:07	08:49						
	21:46	28	06:16 (B4)	20:40			19:18	17:59	31	17:05 (B22)	15:56	15:39	10	13:51 (B24)				
23	04:59	05:48 (B4)	05:59				07:01	08:03		16:36 (B22)	08:09	08:49						
	21:44	28	06:16 (B4)	20:37			19:15	17:57	28	17:04 (B22)	15:55	15:40	9	13:51 (B24)				
24	05:01	05:48 (B4)	06:01				07:03	08:05		16:38 (B22)	08:11	08:50						
	21:43	28	06:16 (B4)	20:35			19:12	17:55	23	17:01 (B22)	15:53	15:40	9	13:52 (B24)				
25	05:03	05:48 (B4)	06:03				07:05	08:07		15:40 (B22)	08:13	08:50						
	21:41	27	06:15 (B4)	20:32			19:10	16:52	18	15:58 (B22)	15:52	15:41	9	13:52 (B24)				
26	05:04	05:49 (B4)	06:05				07:07	08:09		15:45 (B22)	08:15	08:50						
	21:39	26	06:15 (B4)	20:29			19:07	16:50	10	15:55 (B22)	15:51	15:42	8	13:52 (B24)				
27	05:06	05:49 (B4)	06:07				07:09	08:12			08:17	08:51						
	21:37	26	06:15 (B4)	20:27			19:04	16:47			15:49	15:43	6	13:51 (B24)				
28	05:08	05:49 (B4)	06:09				07:11	08:14			08:19	08:51						
	21:36	25	06:14 (B4)	20:24			19:02	16:45			15:48	15:44	4	13:51 (B24)				
29	05:10	05:50 (B4)	06:11				07:13	08:16			08:21	08:51						
	21:34	24	06:14 (B4)	20:22			18:59	16:43			15:47	15:45						
30	05:12	05:51 (B4)	06:13				07:15	08:18			08:22	08:51						
	21:32	23	06:14 (B4)	20:19			18:56	16:40			15:46	15:46						
31	05:14	05:52 (B4)	06:15					07:20				08:51						
	21:30	21	06:13 (B4)	20:17				16:38				15:47						
Potential sun hours	529		469				385			324		247			216			
Total, worst case	736		61					920							106			
Sun reduction	0.49		0.50				0.43	0.26							0.07			
Oper. time red.	0.98		0.98				0.98	0.98							0.98			
Wind dir. red.	0.67		0.67				0.67	0.67							0.65			
Total reduction	0.32		0.33				0.28	0.17							0.04			
Total, real	238		20				11	157							5			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Upmalnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (209)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48 08:50	08:14 16:45 08:12	07:10 17:47 07:08	16:21 (B3) 16:53 (B3) 16:21 (B3)	06:48 19:53 06:46	05:32 20:55 05:30	04:35 21:52 04:34	04:29 22:09 04:30	05:15 21:28 05:17	06:17 20:14 06:19	07:17 18:53 07:19	07:22 16:35 08:26
2	15:49 08:50	16:47 08:10	17:49 07:05	16:52 (B3) 16:21 (B3)	19:55 06:43	20:57 05:27	21:54 04:33	22:08 04:31	21:25 05:19	20:11 06:21	18:50 07:21	16:33 08:27
3	15:50 08:49	16:49 08:08	17:51 07:03	16:51 (B3) 16:22 (B3)	19:57 06:40	20:59 05:25	21:55 04:32	22:08 04:32	21:23 05:21	20:08 06:23	18:48 07:23	16:31 08:29
4	15:51 08:49	16:51 08:06	17:54 07:00	16:51 (B3) 16:22 (B3)	19:59 06:38	21:01 05:23	21:56 04:31	22:07 04:33	21:21 05:23	20:06 06:25	18:45 07:25	16:29 08:30
5	15:53 08:48	16:54 08:04	17:56 06:57	16:50 (B3) 16:22 (B3)	20:01 06:35	21:03 05:21	21:58 04:30	22:06 04:34	21:19 05:25	20:03 06:27	18:43 07:27	16:27 08:32
6	15:54 08:48	16:56 08:02	17:58 06:55	16:48 (B3) 16:24 (B3)	20:03 06:32	21:05 05:18	21:59 04:29	22:06 04:35	21:17 05:27	20:00 06:29	18:40 07:29	16:25 08:33
7	15:56 08:47	16:58 08:00	18:00 06:52	16:47 (B3) 16:26 (B3)	20:05 06:30	21:07 05:16	22:00 04:29	22:05 04:36	21:15 05:29	19:58 06:31	18:37 07:31	16:23 08:35
8	15:57 08:46	17:00 07:58	18:02 06:50	16:45 (B3) 16:27 (B3)	20:07 06:27	21:09 05:14	22:01 04:28	22:04 04:38	21:13 05:31	19:55 06:33	18:35 07:33	16:20 08:36
9	15:59 08:46	17:03 07:56	18:04 06:47	16:42 (B3) 16:33 (B3)	20:09 06:24	21:11 05:12	22:02 04:27	22:03 04:39	21:10 05:33	19:52 06:35	18:32 07:35	16:18 08:38
10	16:01 08:45	17:05 07:54	18:06 06:44	16:38 (B3) 06:22	20:11 05:10	21:13 04:27	22:03 04:40	21:10 05:35	20:11 06:37	19:50 07:37	18:29 07:37	16:16 08:39
11	16:02 08:44	17:07 07:51	18:09 06:42	06:19	20:13	21:15	22:04	22:01	21:06	19:47	18:27	16:14
12	16:04 08:43	17:09 07:49	18:11 06:39	20:15	21:17	22:05	22:00	21:03	19:44	18:24	17:03	16:13
13	16:06 08:42	17:12 07:47	18:13 06:36	20:18	21:19	22:06	21:59	21:01	19:42	18:22	17:01	16:11
14	16:08 08:41	17:14 07:45	18:15 06:34	20:20	21:21	22:06	21:58	21:03	19:44	18:24	17:01	16:10
15	16:09 08:40	17:16 07:42	18:17 06:31	20:22	21:23	22:07	21:56	21:05	19:46	18:26	17:02	16:09
16	16:11 08:38	17:18 07:40	18:19 06:28	20:24	21:25	22:08	21:55	21:07	19:48	18:28	17:04	16:08
17	16:13 08:37	17:21 07:38	18:21 06:26	20:26	21:27	22:08	21:54	21:09	19:50	18:29	17:05	16:07
18	16:15 08:36	17:23 07:35	18:23 06:23	20:28	21:29	22:09	21:52	21:11	19:52	18:31	17:06	16:06
19	16:17 08:34	17:25 07:33	18:25 06:20	20:30	21:31	22:09	21:51	21:13	19:54	18:33	17:07	16:05
20	16:19 08:33	17:27 07:30	18:28 06:18	20:32	21:33	22:09	21:49	21:15	19:56	18:35	17:08	16:04
21	16:21 08:32	17:29 07:28	18:30 06:15	20:34	21:34	22:10	21:48	21:17	19:57	18:37	17:09	16:03
22	16:23 08:30	17:32 07:25	18:32 06:12	20:36	21:36	22:10	21:46	21:19	19:59	18:39	17:11	16:02
23	16:25 08:28	17:34 07:23	18:34 06:10	20:38	21:38	22:10	21:44	21:21	19:59	18:41	17:13	16:01
24	16:27 08:27	17:36 07:20	18:36 06:07	20:41	21:40	22:10	21:43	21:23	19:59	18:43	17:15	16:00
25	16:29 08:25	17:38 07:18	18:38 06:04	20:43	21:42	22:10	21:41	21:25	19:59	18:45	17:17	15:59
26	16:32 08:23	17:40 07:15	18:40 06:02	20:45	21:44	22:10	21:39	21:27	19:59	18:47	17:19	15:58
27	16:34 08:22	17:43 07:13	18:42 05:59	20:47	21:46	22:10	21:37	21:29	19:59	18:49	17:21	15:57
28	16:36 08:20	17:45 07:11	18:44 06:56	20:49	21:48	22:10	21:35	21:31	19:59	18:51	17:23	15:56
29	16:38 08:18	17:47 07:09	18:46 06:54	20:51	21:50	22:10	21:33	21:33	19:59	18:53	17:25	15:55
30	16:40 08:16	17:49 07:07	18:48 06:51	20:53	21:52	22:10	21:31	21:35	19:59	18:55	17:27	15:54
31	16:42 08:14	17:51 07:05	18:50 06:48	20:55	21:54	22:10	21:30	21:37	19:59	18:57	17:29	15:53
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		294	238							542		
Sun reduction		0.20	0.41							0.26		
Oper. time red.		0.98	0.98							0.98		
Wind dir. red.		0.67	0.67							0.67		
Total reduction		0.13	0.27							0.17		
Total, real		39	64							92		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Upmali - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (147)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:47	16:16 (B22) 19:53	06:49 20:55	04:36 05:29 (B4)
2	08:50 15:49	08:13 16:47	07:08 17:50	16:16 (B22) 19:55	06:46 20:57	04:35 05:29 (B4)
3	08:50 15:51	08:11 16:50	07:06 17:52	16:16 (B22) 19:57	06:43 20:59	04:34 05:29 (B4)
4	08:50 15:52	08:09 16:52	07:03 17:54	16:15 (B22) 19:59	06:41 21:01	04:33 05:29 (B4)
5	08:49 15:53	08:07 16:54	07:00 17:56	16:15 (B22) 20:01	06:38 21:04	04:32 05:30 (B4)
6	08:49 15:55	08:05 16:56	06:58 17:58	16:16 (B22) 20:03	06:35 21:06	04:31 05:30 (B4)
7	08:48 15:56	08:03 16:59	06:55 18:00	16:16 (B22) 20:05	06:33 21:08	04:30 05:30 (B4)
8	08:47 15:58	08:00 17:01	06:53 18:03	16:16 (B22) 20:07	06:30 21:10	04:29 05:31 (B4)
9	08:47 15:59	07:58 17:03	06:50 18:05	16:17 (B22) 20:10	06:27 21:12	04:28 05:31 (B4)
10	08:46 16:01	07:56 17:05	06:47 18:07	16:17 (B22) 20:12	06:25 21:14	04:28 05:31 (B4)
11	08:45 16:03	07:54 17:08	06:45 18:09	16:18 (B22) 20:14	06:22 21:16	04:27 05:31 (B4)
12	08:44 16:04	07:52 17:10	06:42 18:11	16:20 (B22) 20:16	06:20 21:18	04:27 05:32 (B4)
13	08:43 16:06	07:49 17:12	06:39 18:13	16:21 (B22) 20:18	06:17 21:20	04:26 05:32 (B4)
14	08:42 16:08	07:47 17:14	06:37 18:15	16:24 (B22) 20:20	06:14 21:22	04:26 05:32 (B4)
15	08:41 16:10	07:45 17:16	06:34 18:17	16:27 (B22) 20:22	06:12 21:23	04:26 05:32 (B4)
16	08:40 16:12	07:42 17:19	06:31 18:20	16:36 (B22) 20:24	06:09 21:25	04:25 05:33 (B4)
17	08:39 16:14	07:40 17:21	06:29 18:22	20:26	06:07 21:27	04:25 05:33 (B4)
18	08:37 16:16	07:38 17:23	06:26 18:24	20:28	06:04 21:29	04:25 05:33 (B4)
19	08:36 16:18	07:35 17:25	06:23 18:26	20:30	06:02 21:31	04:25 05:33 (B4)
20	08:35 16:20	07:33 17:28	16:28 (B22) 18:28	06:21 20:32	05:59 21:33	04:25 05:33 (B4)
21	08:33 16:22	07:31 17:30	16:43 (B22) 18:30	06:18 20:35	05:57 21:35	04:25 05:34 (B4)
22	08:32 16:24	07:28 17:32	16:23 (B22) 18:32	06:15 20:37	05:54 21:36	04:25 05:34 (B4)
23	08:30 16:26	07:26 17:34	16:47 (B22) 18:34	06:13 20:39	05:52 21:38	04:26 05:34 (B4)
24	08:29 16:28	07:23 17:36	16:22 (B22) 18:36	06:10 20:41	05:49 21:40	04:26 05:34 (B4)
25	08:27 16:30	07:21 17:39	16:50 (B22) 18:38	06:07 20:43	05:47 21:42	04:26 05:35 (B4)
26	08:25 16:32	07:18 17:41	16:19 (B22) 18:40	06:05 20:45	05:44 21:43	04:27 05:35 (B4)
27	08:24 16:34	07:16 17:43	16:52 (B22) 18:43	06:02 20:47	05:42 21:45	04:27 05:35 (B4)
28	08:22 16:36	07:13 17:45	16:17 (B22) 18:45	05:59 20:49	05:39 21:46	04:28 05:35 (B4)
29	08:20 16:39		16:53 (B22) 19:47	06:57 20:51	05:37 21:48	04:28 05:35 (B4)
30	08:18 16:41			06:54 20:53	05:35 21:50	04:29 05:36 (B4)
31	08:17 16:43			06:51 19:51	05:33 21:51	04:29 06:00 (B4)
Potential sun hours	235	266	366	426	508	529
Total, worst case		252	462		428	916
Sun reduction		0.20	0.41		0.57	0.56
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.67	0.67		0.67	0.67
Total reduction		0.13	0.27		0.37	0.37
Total, real		33	125		160	337

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Upmali - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (147)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July		August		September		October		November		December	
1	04:30	05:35 (B4)	05:16	06:17			07:17	17:00 (B22)	07:22	08:24		
	22:09	31 06:06 (B4)	21:28	20:14			18:54	24 17:24 (B22)	16:36	15:45		
2	04:31	05:36 (B4)	05:17	06:19			07:19	16:58 (B22)	07:25	08:26		
	22:08	30 06:06 (B4)	21:26	20:11			18:51	28 17:26 (B22)	16:34	15:44		
3	04:32	05:36 (B4)	05:19	06:21			07:21	16:56 (B22)	07:27	08:27		
	22:08	31 06:07 (B4)	21:24	20:09			18:48	30 17:26 (B22)	16:31	15:43		
4	04:33	05:36 (B4)	05:21	06:23			07:23	16:55 (B22)	07:29	08:29		
	22:07	31 06:07 (B4)	21:22	20:06			18:46	32 17:27 (B22)	16:29	15:42		
5	04:34	05:36 (B4)	05:23	06:25			07:25	16:53 (B22)	07:31	08:31		
	22:07	31 06:07 (B4)	21:19	20:03			18:43	34 17:27 (B22)	16:27	15:42		
6	04:35	05:37 (B4)	05:25	06:27			07:27	16:52 (B22)	07:33	08:32		
	22:06	31 06:08 (B4)	21:17	20:01			18:40	35 17:27 (B22)	16:25	15:41		
7	04:36	05:37 (B4)	05:27	06:29			07:29	16:51 (B22)	07:36	08:34		
	22:05	31 06:08 (B4)	21:15	19:58			18:38	37 17:28 (B22)	16:23	15:40		
8	04:37	05:37 (B4)	05:29	06:31			07:31	16:50 (B22)	07:38	08:35		
	22:04	31 06:08 (B4)	21:13	19:55			18:35	37 17:27 (B22)	16:21	15:40		
9	04:38	05:37 (B4)	05:31	06:33			07:34	16:50 (B22)	07:40	08:36		
	22:03	31 06:08 (B4)	21:11	19:53			18:32	37 17:27 (B22)	16:19	15:39		
10	04:39	05:37 (B4)	05:33	06:35			07:36	16:50 (B22)	07:42	08:38		
	22:02	31 06:08 (B4)	21:08	19:50			18:30	38 17:28 (B22)	16:17	15:39		
11	04:41	05:37 (B4)	05:35	06:37			07:38	16:50 (B22)	07:44	08:39		
	22:01	31 06:08 (B4)	21:06	19:47			18:27	37 17:27 (B22)	16:15	15:38		
12	04:42	05:38 (B4)	05:37	06:39			07:40	16:50 (B22)	07:46	08:40		
	22:00	31 06:09 (B4)	21:04	19:45			18:25	37 17:27 (B22)	16:13	15:38		
13	04:43	05:38 (B4)	05:39	06:41			07:42	16:50 (B22)	07:48	08:41		
	21:59	31 06:09 (B4)	21:01	19:42			18:22	36 17:26 (B22)	16:11	15:38		
14	04:45	05:38 (B4)	05:41	06:43			07:44	16:50 (B22)	07:51	08:43		
	21:58	31 06:09 (B4)	20:59	19:39			18:19	35 17:25 (B22)	16:09	15:38		
15	04:46	05:38 (B4)	05:43	06:45			07:46	16:51 (B22)	07:53	08:44		
	21:56	30 06:08 (B4)	20:57	19:37			18:17	34 17:25 (B22)	16:07	15:38		
16	04:48	05:39 (B4)	05:45	06:47			07:48	16:51 (B22)	07:55	08:45		
	21:55	30 06:09 (B4)	20:54	19:34			18:14	33 17:24 (B22)	16:06	15:38		
17	04:49	05:38 (B4)	05:47	06:49			07:50	16:51 (B22)	07:57	08:45		
	21:54	30 06:08 (B4)	20:52	19:31			18:12	32 17:23 (B22)	16:04	15:38		
18	04:51	05:39 (B4)	05:49	06:51			07:52	16:52 (B22)	07:59	08:46		
	21:52	30 06:09 (B4)	20:49	19:28			18:09	29 17:21 (B22)	16:02	15:38		
19	04:52	05:39 (B4)	05:51	06:53			07:54	16:53 (B22)	08:01	08:47		
	21:51	29 06:08 (B4)	20:47	19:26			18:07	26 17:19 (B22)	16:01	15:38		
20	04:54	05:40 (B4)	05:53	06:55			07:57	16:55 (B22)	08:03	08:48		
	21:49	28 06:08 (B4)	20:45	19:23			18:04	23 17:18 (B22)	15:59	15:38		
21	04:56	05:40 (B4)	05:55	06:57			07:59	16:57 (B22)	08:05	08:48		
	21:48	27 06:07 (B4)	20:42	19:20			18:02	18 17:15 (B22)	15:58	15:39		
22	04:57	05:41 (B4)	05:57	06:59			08:01	17:00 (B22)	08:07	08:49		
	21:46	26 06:07 (B4)	20:40	19:18			17:59	12 17:12 (B22)	15:56	15:39		
23	04:59	05:41 (B4)	05:59	07:01			08:03		08:09	08:49		
	21:44	25 06:06 (B4)	20:37	19:15			17:57		15:55	15:40		
24	05:01	05:43 (B4)	06:01	07:03			08:05		08:11	08:50		
	21:43	23 06:06 (B4)	20:35	19:12			17:55		15:53	15:40		
25	05:03	05:43 (B4)	06:03	07:05			07:07		08:13	08:50		
	21:41	21 06:04 (B4)	20:32	19:10			16:52		15:52	15:41		
26	05:04	05:44 (B4)	06:05	07:07			07:09		08:15	08:50		
	21:39	20 06:04 (B4)	20:29	19:07			16:50		15:51	15:42		
27	05:06	05:46 (B4)	06:07	07:09			07:12		08:17	08:51		
	21:37	17 06:03 (B4)	20:27	19:04			16:47		15:49	15:43		
28	05:08	05:47 (B4)	06:09	07:11			07:14		08:19	08:51		
	21:36	13 06:00 (B4)	20:24	19:02			16:45		15:48	15:44		
29	05:10	05:50 (B4)	06:11	07:13			07:16		08:21	08:51		
	21:34	8 05:58 (B4)	20:22	18:59	14	17:20 (B22)	16:43		15:47	15:44		
30	05:12		06:13	07:15		17:02 (B22)	07:18		08:22	08:51		
	21:32		20:19	18:56	21	17:23 (B22)	16:40		15:46	15:46		
31	05:14		06:15				07:20			08:51		
	21:30		20:16				16:38			15:47		
Potential sun hours	529		469	385			324		247	216		
Total, worst case		790		35			684					
Sun reduction		0.49		0.43			0.26					
Oper. time red.		0.98		0.98			0.98					
Wind dir. red.		0.67		0.67			0.67					
Total reduction		0.32		0.28			0.17					
Total, real		256		10			116					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Upiš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (210)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:16	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:40	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Urbani 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (108)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:49	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:27 15:44
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:56	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:19	06:25 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
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15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	05:00 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
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27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:37	06:08 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:36	06:10 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Urgas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (55)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
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19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
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22	08:32 16:24	07:28 17:32	06:16 18:32	06:16 20:37	05:54 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
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24	08:29 16:28	07:23 17:37	06:10 18:36	06:10 20:41	05:49 21:40	04:26 22:11	04:26 21:43	05:01 20:35	06:01 19:12	07:03 17:55	08:05 15:53	08:51 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	05:47 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
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30	08:19 16:41		06:54 19:49	05:35 20:53	05:35 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		05:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Uzkalnini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (211)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:47	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:25	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43
3	08:50 15:50	08:10 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:42
4	08:49 15:51	08:08 16:51	07:03 17:53	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	08:30 15:41
6	08:48 15:54	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:33 15:40
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19	08:36 16:17	07:35 17:25	06:23 18:25	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
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22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:00 17:59	08:07 15:55	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:25 22:10	04:58 21:44	05:59 20:37	07:01 19:15	08:03 17:56	08:09 15:54	08:49 15:39
24	08:28 16:27	07:23 17:36	06:10 18:36	05:49 20:40	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
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28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:07 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:09 21:33	06:11 20:21	07:13 18:58	07:16 16:42	08:20 15:46	08:51 15:44
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31	08:16 16:42		06:51 19:50		04:36 21:51		05:13 21:29	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vaivarini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (171)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	05:16 (B14) 04:30 22:09	05:23 (B14) 05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	05:16 (B14) 04:31 22:08	05:22 (B14) 05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	05:17 (B14) 04:32 22:08	05:23 (B14) 05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	05:17 (B14) 04:33 22:07	05:23 (B14) 05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
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9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	05:18 (B14) 04:38 22:03	05:23 (B14) 05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
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13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	05:19 (B14) 04:44 21:59	05:24 (B14) 05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:41 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	05:20 (B14) 04:45 21:58	05:24 (B14) 05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
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18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	05:20 (B14) 04:51 21:52	05:27 (B14) 05:49 20:50	06:51 19:29	07:52 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09	05:21 (B14) 04:53 21:51	05:28 (B14) 05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	05:21 (B14) 04:54 21:49	05:30 (B14) 05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:22 (B14) 05:07 21:37	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:23 (B14) 05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:10 17:44	05:57 18:47	05:37 20:51	04:40 21:48	04:29 22:10	05:22 (B14) 05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41	07:06 17:49	05:54 18:53	05:35 20:53	04:39 21:50	04:30 22:09	05:23 (B14) 05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:05 17:51	05:52 18:51	05:37 20:53	04:37 21:51	04:37 22:09	05:23 (B14) 05:14 21:30	06:15 20:17	07:20 16:38	07:20 16:38	08:22 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case					213	651	471					
Sun reduction					0.57	0.56	0.49					
Oper. time red.					0.98	0.98	0.98					
Wind dir. red.					0.67	0.67	0.67					
Total reduction					0.37	0.37	0.32					
Total, real					80	239	153					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vecleiš upi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (181)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vecumi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (18)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:42 15:37
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:04	08:46 15:37
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:43		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vecveveri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (45)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	06:39 (B14) 21:53
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	06:39 (B14) 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	06:40 (B14) 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	06:41 (B14) 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	06:42 (B14) 21:58
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	06:43 (B14) 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	06:44 (B14) 22:00
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	06:45 (B14) 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	06:47 (B14) 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	06:50 (B14) 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	07:01 (B14) 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	06:56 (B14) 07:05 (B14)	05:09 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	06:52 (B14) 07:10 (B14)	05:07 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	06:49 (B14) 07:11 (B14)	05:05 21:22
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	06:48 (B14) 07:13 (B14)	05:03 21:24
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	06:45 (B14) 07:14 (B14)	05:01 21:25
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	06:44 (B14) 07:15 (B14)	04:59 21:27
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	06:43 (B14) 07:15 (B14)	04:57 21:29
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	06:42 (B14) 07:16 (B14)	04:55 21:31
20	08:35 16:20	07:33 17:28	06:21 18:28	06:00 20:33	06:42 (B14) 07:17 (B14)	04:54 21:33
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	06:40 (B14) 07:17 (B14)	04:52 21:35
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	06:40 (B14) 07:17 (B14)	04:50 21:36
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:39 (B14) 07:17 (B14)	04:48 21:38
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:39 (B14) 07:17 (B14)	04:47 21:40
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	06:39 (B14) 07:17 (B14)	04:45 21:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	06:38 (B14) 07:16 (B14)	04:44 21:43
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	06:38 (B14) 07:16 (B14)	04:42 21:45
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	06:39 (B14) 07:16 (B14)	04:41 21:47
29	08:20 16:39		06:57 19:47	05:37 20:51	06:39 (B14) 07:16 (B14)	04:40 21:48
30	08:18 16:41		06:54 19:49	05:35 20:53	06:39 (B14) 07:15 (B14)	04:38 21:50
31	08:17 16:43		06:51 19:51	07:43 (B24) 07:54 (B24)		04:37 21:51
Potential sun hours	235	266	366	426	508	528
Total, worst case			241	609	261	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.65	0.66	0.66	
Total reduction			0.26	0.32	0.37	
Total, real			63	196	95	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vecveveri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (45)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28		06:17 20:14	07:17 18:54	07:23 16:36
2	04:31 22:08	05:18 21:26	07:03 (B14) 07:08 (B14)	06:19 20:11	07:19 18:51	07:25 16:34
3	04:32 22:08	05:20 21:24	06:59 (B14) 07:13 (B14)	06:21 20:09	07:21 18:48	07:27 16:32
4	04:33 22:07	05:22 21:22	06:57 (B14) 07:15 (B14)	06:23 20:06	07:23 18:46	07:29 16:30
5	04:34 22:07	05:24 21:19	06:55 (B14) 07:17 (B14)	06:25 20:03	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	06:53 (B14) 07:18 (B14)	06:27 20:01	07:28 18:40	07:33 16:25
7	04:36 22:05	05:27 21:15	06:52 (B14) 07:19 (B14)	06:29 19:58	07:30 18:38	07:36 16:23
8	04:37 22:04	05:29 21:13	06:51 (B14) 07:20 (B14)	06:31 19:56	07:32 18:35	07:38 16:21
9	04:38 22:03	05:31 21:11	06:50 (B14) 07:21 (B14)	06:33 19:53	07:34 18:33	07:40 16:19
10	04:40 22:02	05:33 21:08	06:49 (B14) 07:22 (B14)	06:35 19:50	07:36 18:30	07:42 16:17
11	04:41 22:01	05:35 21:06	06:49 (B14) 07:23 (B14)	06:37 19:47	07:38 18:27	07:44 16:15
12	04:42 22:00	05:37 21:04	06:47 (B14) 07:23 (B14)	06:39 19:45	07:35 (B24) 07:45 (B24)	07:40 18:25
13	04:44 21:59	05:39 21:02	06:47 (B14) 07:23 (B14)	06:41 19:42	07:32 (B24) 07:47 (B24)	07:42 18:22
14	04:45 21:58	05:41 20:59	06:46 (B14) 07:23 (B14)	06:43 19:39	07:31 (B24) 07:48 (B24)	07:44 18:20
15	04:46 21:57	05:43 20:57	06:46 (B14) 07:24 (B14)	06:45 19:37	07:29 (B24) 07:49 (B24)	07:46 18:17
16	04:48 21:55	05:45 20:54	06:46 (B14) 07:24 (B14)	06:47 19:34	07:28 (B24) 07:49 (B24)	07:48 18:15
17	04:49 21:54	05:47 20:52	06:46 (B14) 07:24 (B14)	06:49 19:31	07:27 (B24) 07:49 (B24)	07:50 18:12
18	04:51 21:52	05:49 20:50	06:45 (B14) 07:24 (B14)	06:51 19:29	07:27 (B24) 07:49 (B24)	07:52 18:09
19	04:53 21:51	05:51 20:47	06:44 (B14) 07:23 (B14)	06:53 19:26	07:27 (B24) 07:49 (B24)	07:55 18:07
20	04:54 21:49	05:53 20:45	06:45 (B14) 07:22 (B14)	06:55 19:23	07:26 (B24) 07:48 (B24)	07:57 18:04
21	04:56 21:48	05:55 20:42	06:45 (B14) 07:22 (B14)	06:57 19:21	07:26 (B24) 07:48 (B24)	07:59 18:02
22	04:58 21:46	05:57 20:40	06:45 (B14) 07:22 (B14)	06:59 19:18	07:28 (B24) 07:46 (B24)	08:01 18:00
23	04:59 21:45	05:59 20:37	06:45 (B14) 07:21 (B14)	07:01 19:15	07:30 (B24) 07:45 (B24)	08:03 17:57
24	05:01 21:43	06:01 20:35	06:46 (B14) 07:20 (B14)	07:03 19:12	07:32 (B24) 07:43 (B24)	08:05 17:55
25	05:03 21:41	06:03 20:32	06:46 (B14) 07:19 (B14)	07:05 19:10	07:34 (B24) 07:40 (B24)	08:07 17:52
26	05:05 21:39	06:05 20:30	06:47 (B14) 07:18 (B14)	07:07 19:07	07:10 16:50	08:15 15:51
27	05:06 21:38	06:07 20:27	06:48 (B14) 07:17 (B14)	07:09 19:04	07:12 16:48	08:17 15:50
28	05:08 21:36	06:09 20:24	06:49 (B14) 07:14 (B14)	07:11 19:02	07:14 16:45	08:19 15:48
29	05:10 21:34	06:11 20:22	06:50 (B14) 07:12 (B14)	07:13 18:59	07:16 16:43	08:21 15:47
30	05:12 21:32	06:13 20:19	06:52 (B14) 07:09 (B14)	07:15 18:56	07:18 16:41	08:22 15:46
31	05:14 21:30	06:15 20:17	06:56 (B14) 07:05 (B14)		07:20 16:38	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		886	243			
Sun reduction		0.50	0.43			
Oper. time red.		0.98	0.98			
Wind dir. red.		0.66	0.65			
Total reduction		0.32	0.27			
Total, real		284	66			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Viduslejas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (5)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	08:51 (B22) 17:48	07:11 19:53	06:49 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:23 16:36	08:24 (B22) 15:45
2	08:51 15:49	08:13 16:47	08:51 (B22) 17:50	07:08 19:55	06:46 20:58	05:30 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:22 (B22) 15:44
3	08:50 15:51	08:11 16:50	08:51 (B22) 17:52	07:06 19:57	06:43 21:00	05:28 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:22 (B22) 15:43
4	08:50 15:52	08:09 16:52	08:51 (B22) 17:54	07:03 19:59	06:41 21:02	05:26 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:21 (B22) 15:42
5	08:49 15:53	08:07 16:54	08:51 (B22) 17:56	07:01 19:58	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27	08:22 (B22) 15:42
6	08:49 15:55	08:05 16:56	08:51 (B22) 17:58	06:58 20:03	06:35 21:06	05:21 21:59	04:31 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:21 (B22) 15:41
7	08:48 15:56	08:03 16:59	08:52 (B22) 18:01	06:55 20:06	06:33 21:08	05:19 22:00	04:36 22:05	05:27 21:15	06:29 20:01	07:30 18:38	07:36 16:23	08:21 (B22) 15:40
8	08:48 15:58	08:01 17:01	08:53 (B22) 18:03	06:53 20:08	06:30 21:10	05:17 22:01	04:37 22:04	05:29 21:13	06:31 20:06	07:32 18:35	07:38 16:21	08:22 (B22) 15:40
9	08:47 15:59	07:58 17:03	08:53 (B22) 18:05	06:50 20:10	06:28 21:12	05:15 22:02	04:38 22:03	05:31 21:11	06:33 20:06	07:34 18:32	07:40 16:19	08:21 (B22) 15:39
10	08:46 16:01	07:56 17:05	08:54 (B22) 18:07	06:47 20:12	06:25 21:14	05:13 22:03	04:39 22:02	05:33 21:09	06:35 20:06	07:36 18:30	07:42 16:17	08:22 (B22) 15:39
11	08:45 16:03	07:54 17:08	08:56 (B22) 18:09	06:45 20:14	06:22 21:16	05:11 22:04	04:41 22:01	05:39 21:06	06:37 20:06	07:38 18:27	07:44 16:15	08:23 (B22) 15:38
12	08:44 16:05	07:52 17:10	08:58 (B22) 18:11	06:42 20:16	06:20 21:18	05:08 22:05	04:42 22:00	05:37 21:04	06:39 20:06	07:40 18:25	07:46 16:13	08:23 (B22) 15:38
13	08:43 16:06	07:50 17:12	09:00 (B22) 18:13	06:40 20:18	06:17 21:20	05:06 22:06	04:43 21:59	05:39 21:02	06:41 20:06	07:42 18:22	07:49 16:11	08:25 (B22) 15:38
14	08:42 16:08	07:47 17:14	09:01 (B22) 18:15	06:37 20:20	06:15 21:22	05:05 22:07	04:45 21:58	05:41 20:59	06:43 20:06	07:44 18:20	07:51 16:09	08:26 (B22) 15:38
15	08:41 16:10	07:45 17:17	09:02 (B22) 18:18	06:34 20:22	06:12 21:24	05:03 22:07	04:46 21:57	05:43 20:57	06:45 20:06	07:46 18:17	07:53 16:08	08:29 (B22) 15:38
16	08:40 16:12	07:43 17:19	09:03 (B22) 18:20	06:32 20:24	06:09 21:26	05:01 22:08	04:48 21:55	05:45 20:54	06:47 20:06	07:48 18:14	07:55 16:06	08:31 (B22) 15:38
17	08:39 16:14	07:40 17:21	09:04 (B22) 18:22	06:29 20:26	06:07 21:27	04:59 22:09	04:49 21:54	05:47 20:52	06:49 20:06	07:50 18:12	07:57 16:04	08:33 (B22) 15:38
18	08:38 16:16	07:38 17:23	09:05 (B22) 18:24	06:26 20:28	06:04 21:29	04:57 22:09	04:51 21:53	05:49 20:50	06:51 20:06	07:52 18:09	07:59 16:02	08:36 (B22) 15:38
19	08:36 16:18	07:36 17:26	09:06 (B22) 18:26	06:24 20:31	06:02 21:31	04:55 22:09	04:52 21:51	05:51 20:47	06:53 20:06	07:55 18:07	08:01 16:01	08:40 15:38
20	08:35 16:20	07:33 17:28	09:07 (B22) 18:28	06:22 20:33	06:00 21:33	04:53 22:10	04:54 21:50	05:53 20:45	06:55 20:06	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	09:08 (B22) 18:30	06:20 20:35	05:57 21:35	04:52 22:10	04:56 21:48	05:55 20:42	06:57 20:06	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	09:09 (B22) 18:32	06:16 20:37	05:54 21:37	04:50 22:10	04:57 21:46	05:57 20:40	06:59 20:06	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	09:10 (B22) 18:34	06:13 20:39	05:52 21:38	04:48 22:10	04:59 21:45	05:59 20:37	07:01 20:06	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	09:11 (B22) 18:36	06:10 20:41	05:49 21:40	04:47 22:10	04:56 21:43	06:01 20:35	07:03 20:06	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	09:00 (B22) 17:39	09:12 (B22) 18:38	06:08 20:43	05:47 21:42	04:45 22:10	04:56 21:41	06:03 20:32	07:05 20:06	08:07 17:52	08:13 15:52	08:51 15:41
26	08:26 16:32	08:58 (B22) 17:41	09:13 (B22) 18:41	06:05 20:45	05:44 21:43	04:44 22:10	04:57 21:39	06:05 20:30	07:07 20:06	08:09 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	08:56 (B22) 17:43	09:14 (B22) 18:43	06:02 20:47	05:42 21:45	04:42 22:10	04:56 21:38	06:07 20:27	07:09 20:06	08:11 17:47	08:17 15:49	08:51 15:43
28	08:22 16:36	08:54 (B22) 17:45	09:15 (B22) 18:45	05:59 20:49	05:40 21:47	04:41 22:10	04:58 21:36	06:09 20:24	07:11 20:06	08:13 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39	08:53 (B22) 17:41	09:16 (B22) 18:47	05:57 20:51	05:37 21:48	04:40 22:10	04:59 21:34	06:11 20:22	07:13 20:06	08:15 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41	08:52 (B22) 17:42	09:17 (B22) 18:48	05:54 20:53	05:35 21:50	04:38 22:09	05:12 21:32	06:13 20:19	07:15 20:06	08:17 17:41	08:23 (B22) 15:46	08:51 15:46
31	08:17 16:43	08:52 (B22) 17:43	09:18 (B22) 18:49	06:51 21:51	04:37 21:51	05:14 21:30	06:15 20:17	07:20 20:06	08:25 (B22) 16:41	08:28 (B22) 17:42	08:29 (B22) 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	99	244								30	320	
Sun reduction	0.13	0.20								0.26	0.08	
Oper. time red.	0.98	0.98								0.98	0.98	
Wind dir. red.	0.60	0.60								0.60	0.60	
Total reduction	0.08	0.12								0.15	0.05	
Total, real	8	29								5	15	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vijas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (29)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:49	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:28 15:44
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:26 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 20:04	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 20:06	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 20:06	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 20:06	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 20:06	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 20:06	07:40 18:25	07:46 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 20:06	07:42 18:22	07:49 16:12	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 20:06	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 20:06	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 20:06	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 20:06	07:50 18:12	07:57 16:04	08:46 15:38
18	08:37 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 20:06	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 20:06	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:54 22:10	04:54 21:49	05:53 20:45	06:55 20:06	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 20:06	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 20:06	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	05:00 21:45	05:59 20:37	07:01 20:06	08:03 18:00	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:50 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 20:06	08:05 18:00	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 20:06	08:07 18:00	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:06 20:30	07:07 20:06	08:08 18:00	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 20:06	08:12 18:00	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:24	07:11 20:06	08:14 18:00	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 20:06	08:16 18:00	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 20:06	08:18 18:00	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 18:00		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vilbaude - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (17)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:54 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vilniš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (138)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March	April	May	June
1	08:51	13:29 (B22)	08:15	13:41 (B22)	07:11	06:49			05:32	04:36
	15:48	40	14:09 (B22)	16:45	36	14:17 (B22)	17:47	19:53	20:55	21:53
2	08:50	13:29 (B22)	08:13	13:43 (B22)	07:08	06:46			05:30	04:35
	15:49	41	14:10 (B22)	16:47	33	14:16 (B22)	17:50	19:55	20:57	21:54
3	08:50	13:29 (B22)	08:11	13:44 (B22)	07:06	06:43			05:28	04:34
	15:51	42	14:11 (B22)	16:50	31	14:15 (B22)	17:52	19:57	20:59	21:55
4	08:50	13:29 (B22)	08:09	13:46 (B22)	07:03	06:41			05:26	04:33
	15:52	42	14:11 (B22)	16:52	28	14:14 (B22)	17:54	19:59	21:02	21:57
5	08:49	13:30 (B22)	08:07	13:49 (B22)	07:00	06:38			05:23	04:32
	15:53	42	14:12 (B22)	16:54	24	14:13 (B22)	17:56	20:01	21:04	21:58
6	08:49	13:30 (B22)	08:05	13:51 (B22)	06:58	06:35			05:21	04:31
	15:55	43	14:13 (B22)	16:56	18	14:09 (B22)	17:58	20:03	21:06	21:59
7	08:48	13:30 (B22)	08:03	13:55 (B22)	06:55	06:33			05:19	04:30
	15:56	43	14:13 (B22)	16:59	11	14:06 (B22)	18:00	20:05	21:08	22:00
8	08:47	13:30 (B22)	08:00		06:53	06:30			05:17	04:29
	15:58	44	14:14 (B22)	17:01	18:03	20:07			21:10	22:01
9	08:47	13:30 (B22)	07:58		06:50	06:27		06:53 (B4)	05:15	04:28
	15:59	44	14:14 (B22)	17:03	18:05	20:10	4	06:57 (B4)	21:12	22:02
10	08:46	13:31 (B22)	07:56		06:47	06:25		06:50 (B4)	05:13	04:28
	16:01	44	14:15 (B22)	17:05	18:07	20:12	9	06:59 (B4)	21:14	22:03
11	08:45	13:31 (B22)	07:54		06:45	06:22		06:48 (B4)	05:10	04:27
	16:03	45	14:16 (B22)	17:08	18:09	20:14	14	07:02 (B4)	21:16	22:04
12	08:44	13:31 (B22)	07:52		06:42	06:20		06:45 (B4)	05:08	04:27
	16:04	45	14:16 (B22)	17:10	18:11	20:16	17	07:02 (B4)	21:18	22:05
13	08:43	13:31 (B22)	07:49		06:39	06:17		06:43 (B4)	05:06	04:26
	16:06	45	14:16 (B22)	17:12	18:13	20:18	20	07:03 (B4)	21:20	22:06
14	08:42	13:32 (B22)	07:47		06:37	06:14		06:42 (B4)	05:04	04:26
	16:08	45	14:17 (B22)	17:14	18:15	20:20	21	07:03 (B4)	21:22	22:07
15	08:41	13:31 (B22)	07:45		06:34	06:12		06:42 (B4)	05:02	04:26
	16:10	46	14:17 (B22)	17:17	18:17	20:22	22	07:04 (B4)	21:24	22:07
16	08:40	13:32 (B22)	07:43		06:31	06:09		06:41 (B4)	05:01	04:25
	16:12	46	14:18 (B22)	17:19	18:20	20:24	22	07:03 (B4)	21:25	22:08
17	08:39	13:32 (B22)	07:40		06:29	06:07		06:41 (B4)	04:59	04:25
	16:14	46	14:18 (B22)	17:21	18:22	20:26	22	07:03 (B4)	21:27	22:08
18	08:37	13:33 (B22)	07:38		06:26	06:04		06:40 (B4)	04:57	04:25
	16:16	46	14:19 (B22)	17:23	18:24	20:28	22	07:02 (B4)	21:29	22:09
19	08:36	13:33 (B22)	07:35		06:23	06:02		06:41 (B4)	04:55	04:25
	16:18	46	14:19 (B22)	17:25	18:26	20:30	21	07:02 (B4)	21:31	22:09
20	08:35	13:34 (B22)	07:33		06:21	05:59		06:41 (B4)	04:53	04:25
	16:20	46	14:20 (B22)	17:28	18:28	20:32	19	07:00 (B4)	21:33	22:10
21	08:33	13:34 (B22)	07:31		06:18	05:57		06:42 (B4)	04:52	04:25
	16:22	46	14:20 (B22)	17:30	18:30	20:35	18	07:00 (B4)	21:35	22:10
22	08:32	13:34 (B22)	07:28		06:15	05:54		06:43 (B4)	04:50	04:25
	16:24	46	14:20 (B22)	17:32	18:32	20:37	16	06:59 (B4)	21:36	22:10
23	08:30	13:34 (B22)	07:26		06:13	05:52		06:44 (B4)	04:48	04:26
	16:26	46	14:20 (B22)	17:34	18:34	20:39	12	06:56 (B4)	21:38	22:10
24	08:29	13:35 (B22)	07:23		06:10	05:49		06:47 (B4)	04:47	04:26
	16:28	44	14:19 (B22)	17:37	18:36	20:41	6	06:53 (B4)	21:40	22:10
25	08:27	13:36 (B22)	07:21		06:07	05:47			04:45	04:26
	16:30	44	14:20 (B22)	17:39	18:38	20:43			21:42	22:10
26	08:25	13:37 (B22)	07:18		06:05	05:44			04:44	04:27
	16:32	43	14:20 (B22)	17:41	18:40	20:45			21:43	22:10
27	08:24	13:37 (B22)	07:16		06:02	05:42			04:42	04:27
	16:34	43	14:20 (B22)	17:43	18:43	20:47			21:45	22:10
28	08:22	13:38 (B22)	07:13		05:59	05:40			04:41	04:28
	16:36	42	14:20 (B22)	17:45	18:45	20:49			21:47	22:10
29	08:20	13:39 (B22)			06:57	05:37			04:39	04:28
	16:39	40	14:19 (B22)		19:47	20:51			21:48	22:10
30	08:18	13:40 (B22)			06:54	05:35			04:38	04:29
	16:41	39	14:19 (B22)		19:49	20:53			21:50	22:09
31	08:17	13:40 (B22)			06:51				04:37	
	16:43	38	14:18 (B22)		19:51				21:51	
Potential sun hours	235		266		366	426		508	529	
Total, worst case	1352		181			265				
Sun reduction	0.13		0.20			0.50				
Oper. time red.	0.98		0.98			0.98				
Wind dir. red.	0.65		0.65			0.66				
Total reduction	0.09		0.13			0.32				
Total, real	115		23			85				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vilniš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (138)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	06:47 (B4)	07:17	07:23
	22:09	21:28	20:14	13	07:00 (B4)	18:54
2	04:31	05:17	06:19	06:49 (B4)	07:19	07:25
	22:08	21:26	20:11	9	06:58 (B4)	18:51
3	04:32	05:19	06:21	06:51 (B4)	07:21	07:27
	22:08	21:24	20:09	4	06:55 (B4)	18:48
4	04:33	05:21	06:23	07:23	07:29	13:24 (B22)
	22:07	21:22	20:06	18:46	16:29	12
5	04:34	05:23	06:25	07:25	07:31	13:36 (B22)
	22:07	21:19	20:03	18:43	16:27	20
6	04:35	05:25	06:27	07:27	07:33	13:40 (B22)
	22:06	21:17	20:01	18:40	16:25	25
7	04:36	05:27	06:29	07:29	07:36	13:43 (B22)
	22:05	21:15	19:58	18:38	16:23	28
8	04:37	05:29	06:31	07:32	07:38	13:44 (B22)
	22:04	21:13	19:55	18:35	16:21	31
9	04:38	05:31	06:33	07:34	07:40	13:46 (B22)
	22:03	21:11	19:53	18:32	16:19	34
10	04:39	05:33	06:35	07:36	07:42	13:47 (B22)
	22:02	21:08	19:50	18:30	16:17	36
11	04:41	05:35	06:37	07:38	07:44	13:48 (B22)
	22:01	21:06	19:47	18:27	16:15	37
12	04:42	05:37	06:39	07:40	07:46	13:49 (B22)
	22:00	21:04	19:45	18:25	16:13	39
13	04:43	05:39	06:41	07:42	07:49	13:50 (B22)
	21:59	21:01	19:42	18:22	16:11	40
14	04:45	05:41	06:43	07:44	07:51	13:51 (B22)
	21:58	20:59	19:39	18:19	16:09	42
15	04:46	05:43	06:45	07:46	07:53	13:52 (B22)
	21:57	20:57	19:37	18:17	16:08	43
16	04:48	05:45	06:47	07:48	07:55	13:53 (B22)
	21:55	20:54	19:34	18:14	16:06	43
17	04:49	05:47	06:49	07:50	07:57	13:54 (B22)
	21:54	20:52	19:31	18:12	16:04	44
18	04:51	05:49	06:51	07:52	07:59	13:55 (B22)
	21:52	20:49	19:29	18:09	16:02	44
19	04:52	05:51	06:53	07:54	08:01	13:56 (B22)
	21:51	20:47	8	18:07	16:01	46
20	04:54	05:53	06:55	07:57	08:03	13:57 (B22)
	21:49	20:45	13	18:04	15:59	46
21	04:56	05:55	06:57	07:59	08:05	13:58 (B22)
	21:48	20:42	15	18:02	15:58	46
22	04:57	05:57	06:59	08:01	08:07	13:59 (B22)
	21:46	20:40	19	17:59	15:56	46
23	04:59	05:59	07:01	08:03	08:09	14:00 (B22)
	21:45	20:37	20	17:57	15:55	46
24	05:01	06:01	07:03	08:05	08:11	14:01 (B22)
	21:43	20:35	21	17:55	15:53	46
25	05:03	06:03	07:05	08:07	08:13	14:02 (B22)
	21:41	20:32	22	16:52	15:52	46
26	05:04	06:05	07:07	08:09	08:15	14:03 (B22)
	21:39	20:29	22	16:50	15:51	46
27	05:06	06:07	07:09	08:11	08:17	14:04 (B22)
	21:37	20:27	23	16:47	15:49	46
28	05:08	06:09	07:11	08:13	08:19	14:05 (B22)
	21:36	20:24	22	16:45	15:48	45
29	05:10	06:11	07:13	08:15	08:21	14:06 (B22)
	21:34	20:22	21	16:43	15:47	46
30	05:12	06:13	07:15	08:17	08:22	14:07 (B22)
	21:32	20:19	20	16:40	15:46	45
31	05:14	06:15	07:17	08:19	08:25	14:08 (B22)
	21:30	20:17	17	16:38	15:47	40
Potential sun hours	529	469	385	324	247	216
Total, worst case		243	26		1068	1253
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.66	0.66		0.65	0.65
Total reduction		0.32	0.27		0.05	0.04
Total, real		78	7		56	56

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vizbuli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (7)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:04	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	05:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vizuli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (74)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:04	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	04:57 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vuš karnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (219)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:47	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:25	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43
3	08:50 15:50	08:10 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:51	08:08 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	08:30 15:41
6	08:48 15:54	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:33 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:09	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:20	08:35 15:39
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:13	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:15	05:08 21:17	04:26 22:05	04:41 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:41 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:06	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:37
15	08:41 16:09	07:44 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:16	07:52 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:33	07:48 18:14	07:55 16:05	08:44 15:37
17	08:38 16:13	07:40 17:20	06:28 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:03	08:45 15:37
18	08:37 16:15	07:37 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:24 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:25	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
20	08:34 16:19	07:33 17:27	06:20 18:28	05:59 20:32	04:53 21:33	04:24 22:09	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:56	08:09 15:54	08:49 15:39
24	08:28 16:27	07:23 17:36	06:10 18:36	05:49 20:40	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:43	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:40	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:50 15:41
27	08:23 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:09 21:33	06:11 20:21	07:13 18:58	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09	05:11 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:50		04:36 21:51		05:13 21:29	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Valodzes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (72)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	06:49	05:33	06:00 (B22) 04:36
	15:48	16:45	17:48	19:53	20:55	20 06:20 (B22) 21:53
2	08:50	08:13	07:08	06:46	05:30	05:58 (B22) 04:35
	15:50	16:48	17:50	19:55	20:58	22 06:20 (B22) 21:54
3	08:50	08:11	07:06	06:43	05:28	05:58 (B22) 04:34
	15:51	16:50	17:52	19:57	21:00	22 06:20 (B22) 21:55
4	08:50	08:09	07:03	06:41	05:26	05:59 (B22) 04:33
	15:52	16:52	17:54	19:59	21:02	21 06:20 (B22) 21:57
5	08:49	08:07	07:01	06:38	05:24	05:59 (B22) 04:32
	15:54	16:54	17:56	20:01	21:04	21 06:20 (B22) 21:58
6	08:49	08:05	06:58	06:36	05:21	05:59 (B22) 04:31
	15:55	16:57	17:58	20:03	21:06	20 06:19 (B22) 21:59
7	08:48	08:03	06:55	06:33	05:19	05:59 (B22) 04:30
	15:56	16:59	18:01	20:06	21:08	20 06:19 (B22) 22:00
8	08:48	08:01	06:53	06:30	05:17	06:00 (B22) 04:29
	15:58	17:01	18:03	20:08	21:10	18 06:18 (B22) 22:01
9	08:47	07:58	06:50	06:28	05:15	06:01 (B22) 04:29
	16:00	17:03	18:05	20:10	21:12	16 06:17 (B22) 22:02
10	08:46	07:56	06:48	07:17 (B14) 06:25	05:13	06:02 (B22) 04:28
	16:01	17:05	18:07	10 07:27 (B14) 20:12	21:14	14 06:16 (B22) 22:03
11	08:45	07:54	06:45	07:13 (B14) 06:22	05:11	06:03 (B22) 04:27
	16:03	17:08	18:09	17 07:30 (B14) 20:14	21:16	11 06:14 (B22) 22:04
12	08:44	07:52	06:42	07:11 (B14) 06:20	05:09	06:05 (B22) 04:27
	16:05	17:10	18:11	21 07:32 (B14) 20:16	21:18	6 06:11 (B22) 22:05
13	08:43	07:50	06:40	07:09 (B14) 06:17	05:07	04:27
	16:06	17:12	18:13	24 07:33 (B14) 20:18	21:20	22:06
14	08:42	07:47	06:37	07:07 (B14) 06:15	05:05	04:26
	16:08	17:14	18:15	27 07:34 (B14) 20:20	21:22	22:07
15	08:41	07:45	06:34	07:06 (B14) 06:12	05:03	04:26
	16:10	17:17	18:18	30 07:36 (B14) 20:22	21:24	22:07
16	08:40	07:43	06:32	07:05 (B14) 06:09	05:01	04:26
	16:12	17:19	18:20	31 07:36 (B14) 20:24	21:25	22:08
17	08:39	07:40	06:29	07:04 (B14) 06:07	04:59	04:25
	16:14	17:21	18:22	32 07:36 (B14) 20:26	21:27	22:08
18	08:37	07:38	06:26	07:03 (B14) 06:04	04:57	04:25
	16:16	17:23	18:24	33 07:36 (B14) 20:28	21:29	22:09
19	08:36	07:36	06:24	07:03 (B14) 06:02	04:55	04:25
	16:18	17:26	18:26	33 07:36 (B14) 20:31	21:31	22:09
20	08:35	07:33	06:21	07:02 (B14) 05:59	04:53	04:25
	16:20	17:28	18:28	34 07:36 (B14) 20:33	21:33	22:10
21	08:33	07:31	06:18	07:01 (B14) 05:57	04:52	04:25
	16:22	17:30	18:30	34 07:35 (B14) 20:35	21:35	22:10
22	08:32	07:28	06:16	07:02 (B14) 05:54	04:50	04:26
	16:24	17:32	18:32	33 07:35 (B14) 20:37	21:37	22:10
23	08:30	07:26	06:13	07:02 (B14) 05:52	04:48	04:26
	16:26	17:34	18:34	32 07:34 (B14) 20:39	21:38	22:10
24	08:29	07:23	06:10	07:02 (B14) 05:49	04:47	04:26
	16:28	17:37	18:36	31 07:33 (B14) 20:41	21:40	22:10
25	08:27	07:21	06:08	07:03 (B14) 05:47	06:14 (B22) 04:45	04:27
	16:30	17:39	18:39	30 07:33 (B14) 20:43	1 06:15 (B22) 21:42	22:10
26	08:26	07:18	06:05	07:03 (B14) 05:44	06:11 (B22) 04:44	04:27
	16:32	17:41	18:41	28 07:31 (B14) 20:45	5 06:16 (B22) 21:43	22:10
27	08:24	07:16	06:02	07:04 (B14) 05:42	06:09 (B22) 04:42	04:27
	16:34	17:43	18:43	25 07:29 (B14) 20:47	9 06:18 (B22) 21:45	22:10
28	08:22	07:13	06:00	07:05 (B14) 05:40	06:07 (B22) 04:41	04:28
	16:37	17:45	18:45	23 07:28 (B14) 20:49	12 06:19 (B22) 21:47	22:10
29	08:20		06:57	08:07 (B14) 05:37	06:05 (B22) 04:40	04:29
	16:39		19:47	18 08:25 (B14) 20:51	15 06:20 (B22) 21:48	22:10
30	08:18		06:54	08:09 (B14) 05:35	06:03 (B22) 04:38	04:29
	16:41		19:49	13 08:22 (B14) 20:53	18 06:21 (B22) 21:50	22:09
31	08:17		06:51		04:37	
	16:43		19:51		21:51	
Potential sun hours	235	266	366	426	508	528
Total, worst case			559	60	211	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.63	0.66	0.66	
Total reduction			0.25	0.32	0.37	
Total, real			141	19	78	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Valodzes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (72)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:15 (B22) 20:14	07:17 18:54	07:49 (B14) 16:36	08:24 15:45
2	04:31 22:08	05:18 21:26	06:13 (B22) 20:11	07:19 18:51	07:51 (B14) 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:12 (B22) 20:09	07:21 18:48	07:53 (B14) 16:32	08:28 15:43
4	04:33 22:07	05:22 21:22	06:11 (B22) 20:06	07:23 18:46	08:07 (B14) 16:29	15:43 08:29
5	04:34 22:07	05:24 21:20	06:10 (B22) 20:03	07:25 18:43	16:30 16:27	15:43 08:31
6	04:35 22:06	05:25 21:17	06:09 (B22) 20:01	07:28 18:40	16:31 16:25	08:31 15:41
7	04:36 22:05	05:27 21:15	06:08 (B22) 19:58	07:30 18:38	16:27 16:23	08:32 15:40
8	04:37 22:04	05:29 21:13	06:08 (B22) 19:56	07:32 18:35	16:27 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:08 (B22) 19:53	07:34 18:33	16:21 16:19	08:37 15:39
10	04:40 22:02	05:33 21:08	06:08 (B22) 19:50	07:36 18:30	16:19 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:08 (B22) 19:47	07:38 18:27	16:17 16:15	08:39 15:39
12	04:42 22:00	05:37 21:04	06:09 (B22) 19:45	07:40 18:25	16:15 16:13	08:40 15:38
13	04:44 21:59	05:39 21:02	06:11 (B22) 19:42	08:01 (B14) 18:22	16:13 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:13 (B22) 19:39	08:12 (B14) 18:20	16:11 16:10	08:43 15:38
15	04:46 21:57	05:43 20:57	06:15 (B22) 19:37	08:15 (B14) 18:17	16:10 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:17 (B22) 19:34	08:17 (B14) 18:15	16:08 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:19 (B22) 19:31	08:18 (B14) 18:12	16:06 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:24 (B22) 19:29	08:19 (B14) 18:09	16:04 16:03	08:46 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	08:20 (B14) 18:07	16:03 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:49 (B14) 18:04	16:01 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:55 (B14) 18:02	16:00 15:58	08:48 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	07:47 (B14) 18:00	16:00 15:56	08:49 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	07:47 (B14) 17:57	16:00 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	07:46 (B14) 17:55	16:00 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	07:46 (B14) 17:52	16:00 15:52	08:51 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	07:46 (B14) 17:50	16:00 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:19 (B14) 17:48	15:51 15:50	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	07:47 (B14) 17:46	15:50 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	07:47 (B14) 17:44	15:48 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:16 (B14) 17:43	15:47 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17		08:14 (B14) 17:41	15:46 15:45	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		271	514		56	
Sun reduction		0.50	0.43		0.26	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.66	0.63		0.63	
Total reduction		0.32	0.26		0.16	
Total, real		87	134		9	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Valodzite - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (141)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Varkali - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (123)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Veji - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (130)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48		06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14		07:17 18:54	25	07:48 (B14) 08:13 (B14)	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50		06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11		07:19 18:51	24	07:48 (B14) 08:12 (B14)	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52		06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09		07:21 18:48	21	07:50 (B14) 08:11 (B14)	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54		06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06		07:23 18:46	17	07:52 (B14) 08:09 (B14)	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56		06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04		07:25 18:43	14	07:54 (B14) 08:08 (B14)	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58		06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01		07:28 18:40	9	07:56 (B14) 08:05 (B14)	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	6	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58		07:30 18:38			07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	11	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56		07:32 18:35			07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	16	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53		07:34 18:33			07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	20	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50		07:36 18:30			07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	23	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48		07:38 18:27			07:44 16:15	08:39 15:39
12	08:44 16:04	07:52 17:10	06:42 18:11	25	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45		07:40 18:25			07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	26	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42		07:42 18:22			07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	27	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39		07:44 18:20			07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	26	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37		07:46 18:17			07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	27	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34		07:48 18:15			07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	26	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31		07:50 18:12			07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	25	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29		07:53 18:09			07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	23	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26		07:55 18:07			08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	22	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	08:02 (B14)	07:57 18:04	5		08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	19	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:58 (B14)	07:59 18:02	13	08:01 (B14)	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	15	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	07:55 (B14)	08:01 18:00	18	08:11 (B14)	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	8	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:13 (B14)	08:03 17:57	21	08:14 (B14)	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	07:52 (B14)	08:05 17:55	23	08:15 (B14)	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:15 (B14)	07:07 16:52	24	08:15 (B14)	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41		05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:15 (B14)	07:10 16:50	25	08:15 (B14)	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:15 (B14)	07:12 16:48	26	08:15 (B14)	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45		05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:15 (B14)	07:14 16:45	27	08:15 (B14)	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47		05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:15 (B14)	07:16 16:43	27	08:15 (B14)	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49		05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:15 (B14)	07:18 16:41	26	08:14 (B14)	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		05:37 21:51	04:37 21:51	04:37 21:51	05:14 20:17	06:15 20:17	07:17 20:17		07:20 16:38			08:24 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	528	529	469	385		324			247	216
Total, worst case				345							235		110			
Sun reduction				0.41							0.43		0.26			
Oper. time red.				0.98							0.98		0.98			
Wind dir. red.				0.62							0.62		0.62			
Total reduction				0.25							0.26		0.16			
Total, real				87							61		17			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vejini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (91)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48		06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14		07:17 18:54	23	07:46 (B14) 08:09 (B14)	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50		06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11		07:19 18:51	20	07:48 (B14) 08:08 (B14)	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52		06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09		07:21 18:48	16	07:50 (B14) 08:06 (B14)	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54		06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06		07:23 18:46	12	07:52 (B14) 08:04 (B14)	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56		06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04		07:25 18:43	7	07:54 (B14) 08:01 (B14)	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58		06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01		07:28 18:40			07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01		06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58		07:30 18:38			07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03		06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56		07:32 18:35			07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	4	07:22 (B14) 07:16 (B14)	20:08 20:28	21:10 21:12	22:01 22:02	21:13 21:11	19:56 19:53		07:34 18:33			07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	10	07:26 (B14) 07:13 (B14)	20:10 20:25	21:12 21:13	22:02 22:03	21:11 21:09	19:53 19:50		07:36 18:30			07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	14	07:27 (B14) 07:10 (B14)	20:12 20:22	21:14 21:14	22:03 22:02	21:08 21:05	19:50 19:48		07:38 18:27			07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	18	07:28 (B14) 07:06 (B14)	20:14 20:16	21:16 21:18	22:04 22:05	21:06 21:04	19:48 19:45		07:40 18:25			07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	22	07:30 (B14) 07:05 (B14)	20:16 20:15	21:18 21:20	22:00 22:06	21:04 21:02	19:45 19:42		07:42 18:22			07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	24	07:30 (B14) 07:05 (B14)	20:18 20:20	21:20 21:22	22:06 22:07	21:05 21:05	19:42 19:39		07:44 18:20			07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	25	07:30 (B14) 07:05 (B14)	20:20 20:22	21:22 21:24	22:07 22:07	21:05 21:07	19:39 19:37		07:46 18:17			07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	26	07:30 (B14) 07:04 (B14)	20:22 20:24	21:24 21:26	22:07 22:08	21:07 21:05	19:37 19:34		07:48 18:15			07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	26	07:30 (B14) 07:03 (B14)	20:24 20:26	21:26 21:27	22:08 22:08	21:05 21:04	19:34 19:31		07:50 18:12			07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	27	07:30 (B14) 07:04 (B14)	20:26 20:28	21:27 21:29	22:08 22:09	21:04 21:02	19:31 19:29		07:52 18:09			07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	26	07:29 (B14) 07:04 (B14)	20:28 20:31	21:29 21:31	22:09 22:09	21:02 21:01	19:29 19:26		07:55 18:07	5	07:59 (B14) 08:04 (B14)	07:55 18:07	08:01 16:01
20	08:35 16:20	07:33 17:28	06:21 18:28	25	07:29 (B14) 07:04 (B14)	20:31 20:33	21:31 21:33	22:09 22:10	21:01 21:00	19:26 19:23	13	08:04 (B14) 07:55 (B14)			18:07 18:04	16:01 15:59
21	08:33 16:22	07:31 17:30	06:18 18:30	23	07:27 (B14) 07:04 (B14)	20:33 20:35	21:33 21:35	22:10 22:10	21:49 21:48	19:23 19:21	18	08:08 (B14) 07:52 (B14)			15:59 15:58	15:39 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	22	07:26 (B14) 07:06 (B14)	20:35 20:37	21:35 21:37	22:10 22:10	21:48 21:46	19:21 19:18	21	08:10 (B14) 07:50 (B14)			15:58 15:56	15:39 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	19	07:25 (B14) 07:07 (B14)	20:37 20:39	21:37 21:38	22:10 22:10	21:46 21:45	19:18 19:15	21	08:11 (B14) 07:49 (B14)			15:56 15:55	15:40 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	15	07:22 (B14) 07:10 (B14)	20:39 20:41	21:38 21:40	22:10 22:10	21:45 21:43	19:15 19:12	23	08:12 (B14) 07:48 (B14)			15:55 15:53	15:40 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	8	07:18 (B14) 05:47	20:41 20:43	21:40 21:42	22:10 22:10	21:43 21:41	19:12 19:10	24	08:12 (B14) 07:47 (B14)			17:55 17:07	15:53 15:52
26	08:26 16:32	07:18 17:41	06:05 18:41			20:45 21:43	21:42 21:43	22:10 22:10	21:43 21:39	19:10 19:07	25	08:12 (B14) 07:46 (B14)			16:52 17:10	15:52 15:51
27	08:24 16:34	07:16 17:43	06:02 18:43			20:45 21:45	21:43 21:45	22:10 22:10	21:41 21:38	19:07 19:04	26	08:12 (B14) 07:46 (B14)			16:50 17:12	15:51 15:50
28	08:22 16:37	07:13 17:45	06:00 18:45			20:42 21:47	21:42 21:47	22:10 22:10	21:48 21:36	19:04 19:02	27	08:12 (B14) 07:45 (B14)			16:48 17:14	15:50 15:48
29	08:20 16:39		06:57 19:47			20:49 21:48	21:47 21:48	22:10 22:10	21:36 21:34	19:02 20:22		07:45 (B14) 08:11 (B14)			17:16 16:43	15:47 15:47
30	08:19 16:41		06:54 19:49			20:51 21:50	21:48 21:50	22:10 22:09	21:34 21:32	20:22 20:19	26	07:45 (B14) 08:10 (B14)			17:18 16:41	15:47 15:46
31	08:17 16:43		06:52 19:51			20:53 21:51	21:48 21:51	22:09 21:51	21:32 21:30	20:19 20:17	25				15:46 17:20	15:46 15:47
Potential sun hours	235	266	366		426	508	528	529	469	385		324		247	216	
Total, worst case				334						259		78				
Sun reduction				0.41						0.43		0.26				
Oper. time red.				0.98						0.98		0.98				
Wind dir. red.				0.63						0.63		0.63				
Total reduction				0.25						0.26		0.16				
Total, real				84						68		12				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vejkalni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (163)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		09:32 (B14)	08:15		09:39 (B14)	07:11		06:49		07:45 (B22)	05:33	04:36					
	15:48	15	09:47 (B14)	16:45	21	10:00 (B14)	17:48		19:53	18	08:03 (B22)	20:55	21:53					
2	08:50		09:33 (B14)	08:13		09:41 (B14)	07:08		06:46		07:46 (B22)	05:30	04:35					
	15:49	16	09:49 (B14)	16:48	17	09:58 (B14)	17:50		19:55	14	08:00 (B22)	20:58	21:54					
3	08:50		09:32 (B14)	08:11		09:44 (B14)	07:06		06:43		07:50 (B22)	05:28	04:34					
	15:51	17	09:49 (B14)	16:50	12	09:56 (B14)	17:52		19:57	6	07:56 (B22)	21:00	21:55					
4	08:50		09:32 (B14)	08:09		09:49 (B14)	07:03		06:41			05:26	04:33					
	15:52	18	09:50 (B14)	16:52	3	09:52 (B14)	17:54		19:59			21:02	21:57					
5	08:49		09:32 (B14)	08:07			07:01		06:38			05:23	04:32					
	15:53	20	09:52 (B14)	16:54			17:56		20:01			21:04	21:58					
6	08:49		09:32 (B14)	08:05			06:58		06:36			05:21	04:31					
	15:55	21	09:53 (B14)	16:56			17:58		20:03			21:06	21:59					
7	08:48		09:31 (B14)	08:03			06:55		06:33			05:19	04:30					
	15:56	23	09:54 (B14)	16:59			18:01		20:06			21:08	22:00					
8	08:48		09:31 (B14)	08:01			06:53		06:30			05:17	04:29					
	15:58	23	09:54 (B14)	17:01			18:03		20:08			21:10	22:01					
9	08:47		09:31 (B14)	07:58			06:50		06:28			05:15	04:29					
	16:00	24	09:55 (B14)	17:03			18:05		20:10			21:12	22:02					
10	08:46		09:31 (B14)	07:56			06:47		06:25			05:13	04:28					
	16:01	25	09:56 (B14)	17:05			18:07		20:12			21:14	22:03					
11	08:45		09:31 (B14)	07:54			06:45		06:22			05:11	04:27					
	16:03	26	09:57 (B14)	17:08			18:09		20:14			21:16	22:04					
12	08:44		09:32 (B14)	07:52			06:42		06:20			05:09	04:27					
	16:05	26	09:58 (B14)	17:10			18:11		20:16			21:18	22:05					
13	08:43		09:31 (B14)	07:50			06:40		06:17			05:07	04:26					
	16:06	27	09:58 (B14)	17:12			18:13		20:18			21:20	22:06					
14	08:42		09:31 (B14)	07:47			06:37		06:15			05:05	04:26					
	16:08	28	09:59 (B14)	17:14			18:15		20:20			21:22	22:07					
15	08:41		09:32 (B14)	07:45			06:34		06:12			05:03	04:26					
	16:10	29	10:01 (B14)	17:17			18:18		20:22			21:24	22:07					
16	08:40		09:31 (B14)	07:43			06:32		06:09			05:01	04:26					
	16:12	30	10:01 (B14)	17:19			18:20		20:24			21:26	22:08					
17	08:39		09:32 (B14)	07:40			06:29		06:07			04:59	04:25					
	16:14	30	10:02 (B14)	17:21		6	18:22	06:55 (B22)	20:26			21:27	22:08					
18	08:38		09:31 (B14)	07:38			06:26	06:51 (B22)	20:26			04:57	04:25					
	16:16	31	10:02 (B14)	17:23		13	18:24	07:04 (B22)	20:28			21:29	22:09					
19	08:36		09:31 (B14)	07:36			06:24	06:49 (B22)	20:28			04:55	04:25					
	16:18	31	10:02 (B14)	17:26		18	18:26	07:07 (B22)	20:31			21:31	22:09					
20	08:35		09:32 (B14)	07:33			06:21	06:47 (B22)	20:31			04:53	04:25					
	16:20	31	10:03 (B14)	17:28		21	18:28	07:08 (B22)	20:33			21:33	22:10					
21	08:33		09:32 (B14)	07:31			06:18	06:45 (B22)	20:33			04:52	04:25					
	16:22	31	10:03 (B14)	17:30		23	18:30	07:08 (B22)	20:35			21:35	22:10					
22	08:32		09:32 (B14)	07:28			06:16	06:45 (B22)	20:35			04:50	04:26					
	16:24	31	10:03 (B14)	17:32		25	18:32	07:10 (B22)	20:37			21:37	22:10					
23	08:30		09:32 (B14)	07:26			06:13	06:43 (B22)	20:37			04:48	04:26					
	16:26	31	10:03 (B14)	17:34		27	18:34	07:10 (B22)	20:39			21:38	22:10					
24	08:29		09:34 (B14)	07:23			06:10	06:42 (B22)	20:39			04:47	04:26					
	16:28	30	10:04 (B14)	17:37		27	18:36	07:09 (B22)	20:41			21:40	22:10					
25	08:27		09:34 (B14)	07:21			06:08	06:43 (B22)	20:41			04:45	04:26					
	16:30	30	10:04 (B14)	17:39		27	18:38	07:10 (B22)	20:43			21:42	22:10					
26	08:26		09:34 (B14)	07:18			06:05	06:42 (B22)	20:44			04:44	04:27					
	16:32	30	10:04 (B14)	17:41		27	18:41	07:09 (B22)	20:45			21:43	22:10					
27	08:24		09:35 (B14)	07:16			06:02	06:41 (B22)	20:45			04:42	04:27					
	16:34	29	10:04 (B14)	17:43		27	18:43	07:08 (B22)	20:47			21:45	22:10					
28	08:22		09:36 (B14)	07:13			05:59	06:42 (B22)	20:47			04:41	04:28					
	16:37	27	10:03 (B14)	17:45		26	18:45	07:08 (B22)	20:49			21:47	22:10					
29	08:20		09:37 (B14)				06:57	07:42 (B22)	20:51			04:40	04:29					
	16:39	26	10:03 (B14)			25	19:47	08:07 (B22)	20:51			21:48	22:10					
30	08:19		09:38 (B14)				06:54	07:42 (B22)	20:53			04:38	04:29					
	16:41	24	10:02 (B14)			24	19:49	08:06 (B22)	20:53			21:50	22:09					
31	08:17		09:39 (B14)				06:51	07:44 (B22)				04:37						
	16:43	23	10:02 (B14)			21	19:51	08:05 (B22)				21:51						
Potential sun hours	235			266			366		426			508	529					
Total, worst case	803			53			337		38									
Sun reduction	0.13			0.20			0.41		0.50									
Oper. time red.	0.98			0.98			0.98		0.98									
Wind dir. red.	0.61			0.61			0.64		0.64									
Total reduction	0.08			0.12			0.25		0.31									
Total, real	62			6			86		12									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Veikalni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (163)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:46 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:58 18:02	08:05 15:58	08:49 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:00 18:00	08:07 15:56	08:49 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:50 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 16:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 16:48	08:17 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 16:45	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 16:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17		08:19 16:38		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			381		637	366
Sun reduction			0.43		0.08	0.07
Oper. time red.			0.98		0.98	0.98
Wind dir. red.			0.64		0.61	0.61
Total reduction			0.26		0.05	0.04
Total, real			101		31	15

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vetras - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (161)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	05:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Veveri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (120)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	07:14 (B24) 20:55	04:36 21:52
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:11 (B24) 20:57	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	07:10 (B24) 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:09 (B24) 21:02	04:33 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:08 (B24) 21:04	04:32 21:58
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	07:08 (B24) 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	07:07 (B24) 21:08	04:30 22:00
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:08 (B24) 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	07:08 (B24) 21:12	04:29 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	07:08 (B24) 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:09 (B24) 21:16	04:28 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	07:10 (B24) 21:18	04:27 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:12 (B24) 21:20	04:27 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	07:11 (B24) 21:22	04:26 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	07:11 (B24) 21:24	04:26 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	07:11 (B24) 21:25	04:26 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	07:11 (B24) 21:27	04:25 22:08
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	07:11 (B24) 21:29	04:25 22:09
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	07:11 (B24) 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	07:11 (B24) 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	07:11 (B24) 21:35	04:25 22:10
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	07:11 (B24) 21:36	04:26 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	07:11 (B24) 21:38	04:26 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	07:11 (B24) 21:40	04:26 22:10
25	08:27 16:30	07:21 17:39	06:08 18:38	05:47 20:43	07:11 (B24) 21:42	04:27 22:10
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	07:11 (B24) 21:43	04:27 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	07:11 (B24) 21:45	04:28 22:10
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	07:11 (B24) 21:47	04:28 22:10
29	08:20 16:39		06:57 19:47	05:37 20:51	07:11 (B24) 21:48	04:29 22:10
30	08:18 16:41		06:54 19:49	07:19 (B24) 20:53	07:11 (B24) 21:50	04:29 22:09
31	08:17 16:43		06:51 19:51	07:17 (B24) 20:53	07:11 (B24) 21:51	04:29 22:09
Potential sun hours	235	266	366	426	508	528
Total, worst case			17	248	920	879
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.66	0.66	0.67	0.67
Total reduction			0.26	0.32	0.37	0.37
Total, real			5	80	342	321

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Veveri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (120)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

July			August			September			October			November			December		
1	04:30	06:02 (B14)	05:16	06:04 (B14)	06:17	07:08 (B24)	07:17	07:23	08:24								
	22:09	29	06:31 (B14)	21:28	32	06:36 (B14)	20:14	17	07:25 (B24)	18:54	16:36	15:45					
2	04:31	06:01 (B14)	05:18	06:03 (B14)	06:19	07:07 (B24)	07:19	07:25	08:26								
	22:08	30	06:31 (B14)	21:26	32	06:35 (B14)	20:11	19	07:26 (B24)	18:51	16:34	15:44					
3	04:32	06:01 (B14)	05:20	06:04 (B14)	06:21	07:06 (B24)	07:21	07:27	08:28								
	22:08	30	06:31 (B14)	21:24	30	06:34 (B14)	20:09	21	07:27 (B24)	18:48	16:32	15:43					
4	04:33	06:01 (B14)	05:22	06:06 (B14)	06:23	07:05 (B24)	07:23	07:29	08:29								
	22:07	31	06:32 (B14)	21:22	27	06:33 (B14)	20:06	22	07:27 (B24)	18:46	16:30	15:43					
5	04:34	06:01 (B14)	05:24	06:07 (B14)	06:25	07:04 (B24)	07:25	07:31	08:31								
	22:07	32	06:33 (B14)	21:19	25	06:32 (B14)	20:03	23	07:27 (B24)	18:43	16:27	15:42					
6	04:35	06:01 (B14)	05:25	06:07 (B14)	06:27	07:04 (B24)	07:28	07:33	08:32								
	22:06	32	06:33 (B14)	21:17	23	06:30 (B14)	20:01	23	07:27 (B24)	18:40	16:25	15:41					
7	04:36	06:01 (B14)	05:27	06:09 (B14)	06:29	07:03 (B24)	07:30	07:36	08:34								
	22:05	32	06:33 (B14)	21:15	19	06:28 (B14)	19:58	22	07:25 (B24)	18:38	16:23	15:40					
8	04:37	06:01 (B14)	05:29	06:12 (B14)	06:31	07:03 (B24)	07:32	07:38	08:35								
	22:04	33	06:34 (B14)	21:13	14	06:26 (B14)	19:55	22	07:25 (B24)	18:35	16:21	15:40					
9	04:38	06:00 (B14)	05:31	06:17 (B14)	06:33	07:03 (B24)	07:34	07:40	08:37								
	22:03	34	06:34 (B14)	21:11	4	06:21 (B14)	19:53	21	07:24 (B24)	18:33	16:19	15:39					
10	04:40	06:00 (B14)	05:33			06:35	07:04 (B24)	07:36	08:38								
	22:02	34	06:34 (B14)	21:08		19:50	19	07:23 (B24)	18:30	16:17	15:39						
11	04:41	06:01 (B14)	05:35			06:37	07:06 (B24)	07:38	08:39								
	22:01	35	06:36 (B14)	21:06		19:47	16	07:22 (B24)	18:27	16:15	15:39						
12	04:42	06:01 (B14)	05:37			06:39	07:08 (B24)	07:40	08:40								
	22:00	35	06:36 (B14)	21:04		19:45	12	07:20 (B24)	18:25	16:13	15:38						
13	04:44	06:00 (B14)	05:39			06:41	07:10 (B24)	07:42	08:41								
	21:59	36	06:36 (B14)	21:02		19:42	7	07:17 (B24)	18:22	16:11	15:38						
14	04:45	06:00 (B14)	05:41			06:43		07:44	08:43								
	21:58	36	06:36 (B14)	20:59		19:39		18:20	16:10	15:38							
15	04:46	06:01 (B14)	05:43			06:45		07:46	08:44								
	21:57	36	06:37 (B14)	20:57		19:37		18:17	16:08	15:38							
16	04:48	06:00 (B14)	05:45			06:47		07:48	08:45								
	21:55	37	06:37 (B14)	20:54		19:34		18:15	16:06	15:38							
17	04:49	06:00 (B14)	05:47			06:49		07:50	08:45								
	21:54	37	06:37 (B14)	20:52		19:31		18:12	16:04	15:38							
18	04:51	06:00 (B14)	05:49			06:51		07:52	08:46								
	21:52	38	06:38 (B14)	20:50		19:29		18:09	16:03	15:38							
19	04:53	06:00 (B14)	05:51			06:53		07:55	08:01	08:47							
	21:51	38	06:38 (B14)	20:47		19:26		18:07	16:01	15:38							
20	04:54	06:00 (B14)	05:53			06:55		07:57	08:03	08:48							
	21:49	38	06:38 (B14)	20:45		19:23		18:04	15:59	15:39							
21	04:56	06:00 (B14)	05:55			06:57		07:59	08:05	08:48							
	21:48	38	06:38 (B14)	20:42		19:21		18:02	15:58	15:39							
22	04:58	06:00 (B14)	05:57			06:59		08:01	08:07	08:49							
	21:46	38	06:38 (B14)	20:40		19:18		18:00	15:56	15:40							
23	04:59	06:00 (B14)	05:59			07:01		08:03	08:09	08:49							
	21:45	38	06:38 (B14)	20:37		19:15		17:57	15:55	15:40							
24	05:01	06:00 (B14)	06:01			07:03		08:05	08:11	08:50							
	21:43	38	06:38 (B14)	20:35		19:12		17:55	15:53	15:41							
25	05:03	06:01 (B14)	06:03			07:05		07:07	08:13	08:50							
	21:41	38	06:39 (B14)	20:32		19:10		16:52	15:52	15:41							
26	05:05	06:00 (B14)	06:05			07:07		07:10	08:15	08:51							
	21:39	38	06:38 (B14)	20:30		19:07		16:50	15:51	15:42							
27	05:06	06:01 (B14)	06:07			07:09		07:12	08:17	08:51							
	21:37	37	06:38 (B14)	20:27		19:04		16:48	15:50	15:43							
28	05:08	06:02 (B14)	06:09			07:11		07:14	08:19	08:51							
	21:36	36	06:38 (B14)	20:24		19:02		16:45	15:48	15:44							
29	05:10	06:01 (B14)	06:11			07:13		07:16	08:21	08:51							
	21:34	36	06:37 (B14)	20:22		18:59		16:43	15:47	15:45							
30	05:12	06:02 (B14)	06:13			07:15		07:18	08:22	08:51							
	21:32	35	06:37 (B14)	20:19	10	07:22 (B24)	18:56	16:41	15:46	15:46							
31	05:14	06:03 (B14)	06:15			07:10 (B24)		07:20		08:51							
	21:30	34	06:37 (B14)	20:17	14	07:24 (B24)		16:38		15:47							
Potential sun hours	529		469			385		324		248		216					
Total, worst case	1089		230			244											
Sun reduction	0.49		0.50			0.43											
Oper. time red.	0.98		0.98			0.98											
Wind dir. red.	0.67		0.67			0.66											
Total reduction	0.32		0.32			0.28											
Total, real	351		75			67											

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Veveri 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (92)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	07:33 (B24) 20:55	06:24 (B14) 21:52
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:34 (B24) 20:57	06:24 (B14) 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	07:36 (B24) 21:00	06:24 (B14) 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:39 (B24) 21:02	06:24 (B14) 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:44 (B24) 21:04	06:24 (B14) 21:58
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	06:24 (B14) 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	06:24 (B14) 22:00
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	06:25 (B14) 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	06:25 (B14) 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	06:25 (B14) 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	06:25 (B14) 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	06:26 (B14) 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	06:27 (B14) 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	06:27 (B14) 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	06:28 (B14) 22:08
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	06:28 (B14) 22:09
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	06:30 (B14) 22:10
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	06:31 (B14) 22:11
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	06:32 (B14) 22:12
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	06:33 (B14) 22:13
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	06:34 (B14) 22:14
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	06:35 (B14) 22:15
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	06:36 (B14) 22:16
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	06:37 (B14) 22:17
25	08:27 16:30	07:21 17:39	06:08 18:38	05:47 20:43	04:45 21:42	06:38 (B14) 22:18
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	06:39 (B14) 22:19
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	06:40 (B14) 22:20
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	06:41 (B14) 22:21
29	08:20 16:39	07:11 17:47	05:57 18:47	05:37 20:51	04:40 21:48	06:42 (B14) 22:22
30	08:18 16:41	07:09 17:49	05:54 18:49	05:35 20:53	04:38 21:50	06:43 (B14) 22:23
31	08:17 16:43	07:08 17:51	05:53 18:51	05:34 20:54	04:37 21:51	06:44 (B14) 22:24
Potential sun hours	235	266	366	426	508	528
Total, worst case			216	424	735	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.65	0.65	0.65	
Total reduction			0.26	0.32	0.36	
Total, real			57	135	266	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Veveri 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (92)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October	November	December
1	04:30	05:16	06:36 (B14)	06:17		07:17	07:23	08:24
	22:09	21:28	36 07:12 (B14)	20:14		18:54	16:36	15:45
2	04:31	05:18	06:35 (B14)	06:19		07:19	07:25	08:26
	22:08	21:26	38 07:13 (B14)	20:11		18:51	16:34	15:44
3	04:32	05:20	06:35 (B14)	06:21		07:21	07:27	08:28
	22:08	21:24	38 07:13 (B14)	20:09		18:48	16:32	15:43
4	04:33	05:22	06:35 (B14)	06:23		07:23	07:29	08:29
	22:07	21:22	39 07:14 (B14)	20:06		18:46	16:30	15:43
5	04:34	05:24	06:35 (B14)	06:25		07:25	07:31	08:31
	22:07	21:19	39 07:14 (B14)	20:03		18:43	16:27	15:42
6	04:35	05:25	06:34 (B14)	06:27		07:28	07:33	08:32
	22:06	21:17	40 07:14 (B14)	20:01		18:40	16:25	15:41
7	04:36	05:27	06:34 (B14)	06:29		07:30	07:36	08:34
	22:05	21:15	40 07:14 (B14)	19:58		18:38	16:23	15:40
8	04:37	05:29	06:34 (B14)	06:31	4 07:34 (B24)	07:32	07:38	08:35
	22:04	21:13	40 07:14 (B14)	19:55		18:35	16:21	15:40
9	04:38	05:31	06:34 (B14)	06:33	12 07:30 (B24)	07:34	07:40	08:37
	22:03	21:11	40 07:14 (B14)	19:53		18:33	16:19	15:39
10	04:40	05:33	06:34 (B14)	06:35	16 07:27 (B24)	07:36	07:42	08:38
	22:02	21:08	40 07:14 (B14)	19:50		18:30	16:17	15:39
11	04:41	05:35	06:34 (B14)	06:37	18 07:26 (B24)	07:38	07:44	08:39
	22:01	21:06	40 07:14 (B14)	19:47		18:27	16:15	15:39
12	04:42	05:37	06:33 (B14)	06:39	21 07:24 (B24)	07:40	07:46	08:40
	22:00	21:04	40 07:13 (B14)	19:45		18:25	16:13	15:38
13	04:44	05:39	06:33 (B14)	06:41	22 07:23 (B24)	07:42	07:49	08:42
	21:59	21:02	40 07:13 (B14)	19:42		18:22	16:11	15:38
14	04:45	05:41	06:33 (B14)	06:43	23 07:23 (B24)	07:44	07:51	08:43
	21:58	20:59	39 07:12 (B14)	19:39		18:20	16:10	15:38
15	04:46	05:43	06:34 (B14)	06:45	24 07:22 (B24)	07:46	07:53	08:44
	21:57	20:57	38 07:12 (B14)	19:37		18:17	16:08	15:38
16	04:48	05:45	06:34 (B14)	06:47	23 07:22 (B24)	07:48	07:55	08:45
	21:55	20:54	37 07:11 (B14)	19:34		18:15	16:06	15:38
17	04:49	05:47	06:35 (B14)	06:49	23 07:22 (B24)	07:50	07:57	08:45
	21:54	20:52	36 07:11 (B14)	19:31		18:12	16:04	15:38
18	04:51	05:49	06:36 (B14)	06:51	22 07:22 (B24)	07:52	07:59	08:46
	21:52	20:50	34 07:10 (B14)	19:29		18:09	16:03	15:38
19	04:53	05:51	06:36 (B14)	06:53	21 07:22 (B24)	07:55	08:01	08:47
	21:51	20:47	32 07:08 (B14)	19:26		18:07	16:01	15:38
20	04:54	05:53	06:37 (B14)	06:55	18 07:24 (B24)	07:57	08:03	08:48
	21:49	20:45	29 07:06 (B14)	19:23		18:04	15:59	15:39
21	04:56	05:55	06:38 (B14)	06:57	14 07:26 (B24)	07:59	08:05	08:48
	21:48	20:42	27 07:05 (B14)	19:21		18:02	15:58	15:39
22	04:58	05:57	06:40 (B14)	06:59	9 07:28 (B24)	08:01	08:07	08:49
	21:46	20:40	23 07:03 (B14)	19:18		18:00	15:56	15:40
23	04:59	05:59	06:42 (B14)	07:01	2 07:30 (B24)	08:03	08:09	08:49
	21:45	20:37	19 07:01 (B14)	19:15		17:57	15:55	15:40
24	05:01	06:01	06:45 (B14)	07:03		08:05	08:11	08:50
	21:43	20:35	12 06:57 (B14)	19:12		17:55	15:53	15:41
25	05:03	06:03		07:05		07:07	08:13	08:50
	21:41	20:32		19:10		16:52	15:52	15:41
26	05:05	06:05		07:07		07:10	08:15	08:51
	21:39	20:30		19:07		16:50	15:51	15:42
27	05:06	06:07		07:09		07:12	08:17	08:51
	21:37	20:27		19:04		16:48	15:50	15:43
28	05:08	06:09		07:11		07:14	08:19	08:51
	21:36	20:24		19:02		16:45	15:48	15:44
29	05:10	06:11		07:13		07:16	08:21	08:51
	21:34	20:22		18:59		16:43	15:47	15:45
30	05:12	06:13		07:15		07:18	08:22	08:51
	21:32	20:19		18:56		16:41	15:46	15:46
31	05:14	06:15				07:20		08:51
	21:30	20:17				16:38		15:47
Potential sun hours	529	469		385		324	247	216
Total, worst case	277	836		272				
Sun reduction	0.49	0.50		0.43				
Oper. time red.	0.98	0.98		0.98				
Wind dir. red.	0.65	0.65		0.65				
Total reduction	0.31	0.32		0.27				
Total, real	87	266		74				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Viksnes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (19)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:57	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:37 22:03	05:31 21:11	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:07	06:24 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:04	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:12 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:46	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vipes skola 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (187)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March	April	May	June		
1	08:51		10:04 (B22)	08:15		10:10 (B22)	07:11	06:49	05:32			04:36
	15:48	30	10:34 (B22)	16:45	38	10:48 (B22)	17:48	19:53	20:55			21:53
2	08:50		10:05 (B22)	08:13		10:11 (B22)	07:08	06:46	05:30		05:58 (B1)	04:35
	15:49	31	10:36 (B22)	16:47	37	10:48 (B22)	17:50	19:55	20:57	5	06:03 (B1)	21:54
3	08:50		10:05 (B22)	08:11		10:12 (B22)	07:06	06:43	05:28		05:56 (B1)	04:34
	15:51	31	10:36 (B22)	16:50	35	10:47 (B22)	17:52	19:57	21:00	9	06:05 (B1)	21:55
4	08:50		10:04 (B22)	08:09		10:14 (B22)	07:03	06:41	05:26		05:54 (B1)	04:33
	15:52	33	10:37 (B22)	16:52	32	10:46 (B22)	17:54	19:59	21:02	13	06:07 (B1)	21:57
5	08:49		10:05 (B22)	08:07		10:15 (B22)	07:00	06:38	05:23		05:52 (B1)	04:32
	15:53	33	10:38 (B22)	16:54	31	10:46 (B22)	17:56	20:01	21:04	16	06:08 (B1)	21:58
6	08:49		10:05 (B22)	08:05		10:16 (B22)	06:58	06:35	05:21		05:50 (B1)	04:31
	15:55	34	10:39 (B22)	16:56	27	10:43 (B22)	17:58	20:03	21:06	19	06:09 (B1)	21:59
7	08:48		10:05 (B22)	08:03		10:18 (B22)	06:55	06:33	05:19		05:49 (B1)	04:30
	15:56	34	10:39 (B22)	16:59	24	10:42 (B22)	18:00	20:05	21:08	20	06:09 (B1)	22:00
8	08:48		10:05 (B22)	08:01		10:21 (B22)	06:53	06:30	05:17		05:48 (B1)	04:29
	15:58	35	10:40 (B22)	17:01	19	10:40 (B22)	18:03	20:08	21:10	21	06:09 (B1)	22:01
9	08:47		10:05 (B22)	07:58		10:24 (B22)	06:50	06:28	05:15		05:48 (B1)	04:28
	15:59	36	10:41 (B22)	17:03	12	10:36 (B22)	18:05	20:10	21:12	22	06:10 (B1)	22:02
10	08:46		10:05 (B22)	07:56			06:47	06:25	05:13		05:48 (B1)	04:28
	16:01	37	10:42 (B22)	17:05			18:07	20:12	21:14	22	06:10 (B1)	22:03
11	08:45		10:05 (B22)	07:54			06:45	06:22	05:11		05:47 (B1)	04:27
	16:03	38	10:43 (B22)	17:08			18:09	20:14	21:16	22	06:09 (B1)	22:04
12	08:44		10:05 (B22)	07:52			06:42	06:20	05:08		05:47 (B1)	04:27
	16:04	39	10:44 (B22)	17:10			18:11	20:16	21:18	22	06:09 (B1)	22:05
13	08:43		10:05 (B22)	07:49			06:40	06:17	05:06		05:47 (B1)	04:26
	16:06	39	10:44 (B22)	17:12			18:13	20:18	21:20	22	06:09 (B1)	22:06
14	08:42		10:05 (B22)	07:47			06:37	06:14	05:04		05:48 (B1)	04:26
	16:08	40	10:45 (B22)	17:14			18:15	20:20	21:22	21	06:09 (B1)	22:07
15	08:41		10:05 (B22)	07:45			06:34	06:12	05:03		05:48 (B1)	04:26
	16:10	40	10:45 (B22)	17:17			18:18	20:22	21:24	21	06:09 (B1)	22:07
16	08:40		10:05 (B22)	07:43			06:32	06:09	05:01		05:49 (B1)	04:25
	16:12	41	10:46 (B22)	17:19			18:20	20:24	21:25	19	06:08 (B1)	22:08
17	08:39		10:06 (B22)	07:40			06:29	06:07	04:59		05:50 (B1)	04:25
	16:14	41	10:47 (B22)	17:21			18:22	20:26	21:27	18	06:08 (B1)	22:08
18	08:37		10:05 (B22)	07:38			06:26	06:04	04:57		05:50 (B1)	04:25
	16:16	42	10:47 (B22)	17:23			18:24	20:28	21:29	17	06:07 (B1)	22:09
19	08:36		10:05 (B22)	07:35			06:24	06:02	04:55		05:51 (B1)	04:25
	16:18	42	10:47 (B22)	17:26			18:26	20:30	21:31	14	06:05 (B1)	22:09
20	08:35		10:06 (B22)	07:33			06:21	05:59	04:53		05:52 (B1)	04:25
	16:20	42	10:48 (B22)	17:28			18:28	20:33	21:33	13	06:05 (B1)	22:10
21	08:33		10:06 (B22)	07:31			06:18	05:57	04:52		05:54 (B1)	04:25
	16:22	42	10:48 (B22)	17:30			18:30	20:35	21:35	9	06:03 (B1)	22:10
22	08:32		10:06 (B22)	07:28			06:16	05:54	04:50		05:57 (B1)	04:25
	16:24	43	10:49 (B22)	17:32			18:32	20:37	21:37	3	06:00 (B1)	22:10
23	08:30		10:06 (B22)	07:26			06:13	05:52	04:48			04:26
	16:26	43	10:49 (B22)	17:34			18:34	20:39	21:38			22:10
24	08:29		10:07 (B22)	07:23			06:10	05:49	04:47			04:26
	16:28	43	10:50 (B22)	17:37			18:36	20:41	21:40			22:10
25	08:27		10:07 (B22)	07:21			06:07	05:47	04:45			04:26
	16:30	43	10:50 (B22)	17:39			18:38	20:43	21:42			22:10
26	08:26		10:08 (B22)	07:18			06:05	05:44	04:44			04:27
	16:32	42	10:50 (B22)	17:41			18:41	20:45	21:43			22:10
27	08:24		10:08 (B22)	07:16			06:02	05:42	04:42			04:27
	16:34	42	10:50 (B22)	17:43			18:43	20:47	21:45			22:10
28	08:22		10:08 (B22)	07:13			05:59	05:40	04:41			04:28
	16:36	42	10:50 (B22)	17:45			18:45	20:49	21:47			22:10
29	08:20		10:09 (B22)				06:57	05:37	04:40			04:29
	16:39	41	10:50 (B22)				19:47	20:51	21:48			22:10
30	08:18		10:10 (B22)				06:54	05:35	04:38			04:29
	16:41	40	10:50 (B22)				19:49	20:53	21:50			22:09
31	08:17		10:10 (B22)				06:51		04:37			
	16:43	39	10:49 (B22)				19:51		21:51			
Potential sun hours	235			266			366	426	508			529
Total, worst case	1198			255					348			
Sun reduction	0.13			0.20					0.57			
Oper. time red.	0.98			0.98					0.98			
Wind dir. red.	0.61			0.61					0.67			
Total reduction	0.08			0.12					0.36			
Total, real	93			30					126			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vipes skola 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (187)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	05:58 (B1) 21:28	06:17 20:14	07:17 18:54	07:23 16:36
2	04:31 22:09	05:18 21:26	05:58 (B1) 21:26	06:19 20:11	07:19 18:51	07:25 16:34
3	04:32 22:08	05:19 21:24	05:58 (B1) 21:24	06:21 20:09	07:21 18:48	07:27 16:32
4	04:33 22:07	05:21 21:22	05:58 (B1) 21:22	06:23 20:06	07:23 18:46	07:29 16:29
5	04:34 22:07	05:23 21:20	05:58 (B1) 21:20	06:25 20:03	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	05:58 (B1) 21:17	06:27 20:01	07:27 18:40	07:33 16:25
7	04:36 22:05	05:27 21:15	06:00 (B1) 21:15	06:29 19:58	07:30 18:38	07:36 16:23
8	04:37 22:04	05:29 21:13	06:02 (B1) 21:13	06:31 19:55	07:32 18:35	07:38 16:21
9	04:38 22:03	05:31 21:11	06:04 (B1) 21:11	06:33 19:53	07:34 18:32	07:40 16:19
10	04:39 22:02	05:33 21:08	06:06 (B1) 21:08	06:35 19:50	07:36 18:30	07:42 16:17
11	04:41 22:01	05:35 21:06	06:07 (B1) 21:06	06:37 19:47	07:38 18:27	07:44 16:15
12	04:42 22:00	05:37 21:04	06:09 (B1) 21:04	06:39 19:45	07:40 18:25	07:46 16:13
13	04:43 21:59	05:39 21:02	06:11 (B1) 21:02	06:41 19:42	07:42 18:22	07:49 16:11
14	04:45 21:58	05:41 20:59	06:13 (B1) 20:59	06:43 19:39	07:44 18:19	07:51 16:09
15	04:46 21:57	05:43 20:57	06:15 (B1) 20:57	06:45 19:37	07:46 18:17	07:53 16:08
16	04:48 21:55	05:45 20:54	06:17 (B1) 20:54	06:47 19:34	07:48 18:14	07:55 16:06
17	04:49 21:54	05:47 20:52	06:19 (B1) 20:52	06:49 19:31	07:50 18:12	07:57 16:04
18	04:51 21:52	05:49 20:50	06:21 (B1) 20:50	06:51 19:29	07:52 18:09	07:59 16:02
19	04:52 21:51	05:51 20:47	06:23 (B1) 20:47	06:53 19:26	07:55 18:07	08:01 16:01
20	04:54 21:49	05:53 20:45	06:25 (B1) 20:45	06:55 19:23	07:57 18:04	08:03 15:59
21	04:56 21:48	05:55 20:42	06:27 (B1) 20:42	06:57 19:20	07:59 18:02	08:05 15:58
22	04:57 21:46	05:57 20:40	06:29 (B1) 20:40	06:59 19:18	08:01 17:59	08:07 15:56
23	04:59 21:45	06:03 (B1) 20:37	06:31 (B1) 20:37	07:01 19:15	08:03 17:57	08:09 15:55
24	05:01 21:43	06:05 (B1) 20:35	06:33 (B1) 20:35	07:03 19:12	08:05 17:55	08:11 15:53
25	05:03 21:41	06:07 (B1) 20:32	06:35 (B1) 20:32	07:05 19:10	08:07 17:52	08:13 15:52
26	05:04 21:39	06:09 (B1) 20:30	06:37 (B1) 20:30	07:07 19:07	08:15 17:50	08:21 15:51
27	05:06 21:38	06:11 (B1) 20:27	06:39 (B1) 20:27	07:09 19:04	08:17 17:47	08:23 15:49
28	05:08 21:36	06:13 (B1) 20:24	06:41 (B1) 20:24	07:11 19:02	08:19 17:45	08:25 15:48
29	05:10 21:34	06:15 (B1) 20:22	06:43 (B1) 20:22	07:13 18:59	08:21 17:43	08:27 15:47
30	05:12 21:32	06:17 (B1) 20:19	06:45 (B1) 20:19	07:15 18:56	08:23 17:40	08:29 15:46
31	05:14 21:30	06:19 (B1) 20:17	06:47 (B1) 20:17	07:17 18:54	08:25 17:38	08:31 15:45
Potential sun hours	529	469	385	324	247	216
Total, worst case	165	185	1084	906		
Sun reduction	0.49	0.50	0.08	0.07		
Oper. time red.	0.98	0.98	0.98	0.98		
Wind dir. red.	0.67	0.67	0.61	0.61		
Total reduction	0.31	0.32	0.05	0.04		
Total, real	52	59	52	37		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vipmali - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (115)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January			February			March		April			May			June		
1	08:51		10:26 (B4)	08:15		09:00 (B2)	07:11		06:49			05:32		07:25 (B17)	04:36		07:34 (B17)
	15:48	53	13:12 (B1)	16:45	29	09:29 (B2)	17:47		19:53			20:55	83	08:48 (B17)	21:53	59	08:33 (B17)
2	08:50		10:27 (B4)	08:13		09:00 (B2)	07:08		06:46			05:30		07:25 (B17)	04:34		07:35 (B17)
	15:49	51	13:12 (B1)	16:47	30	09:30 (B2)	17:50		19:55			20:57	83	08:48 (B17)	21:54	57	08:32 (B17)
3	08:50		10:28 (B4)	08:11		09:00 (B2)	07:06		06:43			05:28		07:25 (B17)	04:33		07:35 (B17)
	15:50	49	13:12 (B1)	16:49	31	09:31 (B2)	17:52		19:57			20:59	82	08:47 (B17)	21:55	56	08:31 (B17)
4	08:50		10:28 (B4)	08:09		09:00 (B2)	07:03		06:41		08:04 (B17)	05:25		07:25 (B17)	04:32		07:36 (B17)
	15:52	48	13:12 (B1)	16:52	31	09:31 (B2)	17:54		19:59	19	08:23 (B17)	21:02	82	08:47 (B17)	21:57	55	08:31 (B17)
5	08:49		10:30 (B4)	08:07		09:00 (B2)	07:00		06:38		07:59 (B17)	05:23		07:25 (B17)	04:31		07:37 (B17)
	15:53	46	13:13 (B1)	16:54	32	09:32 (B2)	17:56		20:01	28	08:27 (B17)	21:04	82	08:47 (B17)	21:58	54	08:31 (B17)
6	08:49		10:32 (B4)	08:05		09:00 (B2)	06:58		06:35		07:55 (B17)	05:21		07:25 (B17)	04:31		07:37 (B17)
	15:55	43	13:13 (B1)	16:56	31	09:31 (B2)	17:58		20:03	36	08:31 (B17)	21:06	82	08:47 (B17)	21:59	53	08:30 (B17)
7	08:48		10:33 (B4)	08:03		09:00 (B2)	06:55		06:33		07:52 (B17)	05:19		07:25 (B17)	04:30		07:38 (B17)
	15:56	39	13:13 (B1)	16:58	31	09:31 (B2)	18:00		20:05	42	08:34 (B17)	21:08	81	08:46 (B17)	22:00	51	08:29 (B17)
8	08:48		12:41 (B1)	08:00		09:01 (B2)	06:53		06:30		07:48 (B17)	05:17		07:25 (B17)	04:29		07:39 (B17)
	15:58	32	13:13 (B1)	17:01	31	09:32 (B2)	18:02		20:07	47	08:35 (B17)	21:10	81	08:46 (B17)	22:01	51	08:30 (B17)
9	08:47		12:42 (B1)	07:58		09:00 (B2)	06:50		06:27		07:47 (B17)	05:14		07:25 (B17)	04:28		07:39 (B17)
	15:59	31	13:13 (B1)	17:03	31	09:31 (B2)	18:05		20:10	51	08:38 (B17)	21:12	80	08:45 (B17)	22:02	50	08:29 (B17)
10	08:46		12:43 (B1)	07:56		09:01 (B2)	06:47		06:25		07:44 (B17)	05:12		07:25 (B17)	04:28		07:40 (B17)
	16:01	30	13:13 (B1)	17:05	30	09:31 (B2)	18:07		20:12	55	08:39 (B17)	21:14	80	08:45 (B17)	22:03	49	08:29 (B17)
11	08:45		12:44 (B1)	07:54		09:02 (B2)	06:45		06:22		07:43 (B17)	05:10		07:25 (B17)	04:27		07:40 (B17)
	16:03	29	13:13 (B1)	17:07	29	09:31 (B2)	18:09		20:14	58	08:41 (B17)	21:16	79	08:44 (B17)	22:04	48	08:28 (B17)
12	08:44		12:46 (B1)	07:52		09:02 (B2)	06:42		06:20		07:40 (B17)	05:08		07:25 (B17)	04:27		07:41 (B17)
	16:04	27	13:13 (B1)	17:10	27	09:29 (B2)	18:11		20:16	62	08:42 (B17)	21:18	79	08:44 (B17)	22:05	47	08:28 (B17)
13	08:43		12:46 (B1)	07:49		09:04 (B2)	06:39		06:17		07:39 (B17)	05:06		07:25 (B17)	04:26		07:42 (B17)
	16:06	26	13:12 (B1)	17:12	25	09:29 (B2)	18:13		20:18	64	08:43 (B17)	21:20	78	08:43 (B17)	22:06	46	08:28 (B17)
14	08:42		12:48 (B1)	07:47		09:04 (B2)	06:37		06:14		07:37 (B17)	05:04		07:25 (B17)	04:26		07:41 (B17)
	16:08	24	13:12 (B1)	17:14	23	09:27 (B2)	18:15		20:20	67	08:44 (B17)	21:22	77	08:42 (B17)	22:07	46	08:27 (B17)
15	08:41		12:50 (B1)	07:45		09:06 (B2)	06:34		06:12		07:36 (B17)	05:02		07:26 (B17)	04:25		07:42 (B17)
	16:10	21	13:11 (B1)	17:16	20	09:26 (B2)	18:17		20:22	69	08:45 (B17)	21:24	76	08:42 (B17)	22:07	45	08:27 (B17)
16	08:40		12:51 (B1)	07:43		09:08 (B2)	06:31		06:09		07:35 (B17)	05:00		07:26 (B17)	04:25		07:42 (B17)
	16:12	19	13:10 (B1)	17:19	15	09:23 (B2)	18:19		20:24	70	08:45 (B17)	21:25	75	08:41 (B17)	22:08	45	08:27 (B17)
17	08:39		12:53 (B1)	07:40		09:12 (B2)	06:29		06:07		07:34 (B17)	04:59		07:26 (B17)	04:25		07:43 (B17)
	16:13	16	13:09 (B1)	17:21	8	09:20 (B2)	18:22		20:26	72	08:46 (B17)	21:27	75	08:41 (B17)	22:08	45	08:28 (B17)
18	08:37		12:56 (B1)	07:38			06:26		06:04		07:32 (B17)	04:57		07:27 (B17)	04:25		07:43 (B17)
	16:15	10	13:06 (B1)	17:23			18:24		20:28	74	08:46 (B17)	21:29	74	08:41 (B17)	22:09	45	08:28 (B17)
19	08:36			07:35			06:23		06:02		07:32 (B17)	04:55		07:27 (B17)	04:25		07:44 (B17)
	16:17			17:25			18:26		20:30	75	08:47 (B17)	21:31	73	08:40 (B17)	22:09	44	08:28 (B17)
20	08:35			07:33			06:21		05:59		07:30 (B17)	04:53		07:28 (B17)	04:25		07:44 (B17)
	16:19			17:28			18:28		20:32	77	08:47 (B17)	21:33	72	08:40 (B17)	22:10	44	08:28 (B17)
21	08:33			07:31			06:18		05:56		07:30 (B17)	04:51		07:28 (B17)	04:25		07:44 (B17)
	16:21			17:30			18:30		20:35	78	08:48 (B17)	21:35	71	08:39 (B17)	22:10	44	08:28 (B17)
22	08:32			07:28			06:15		05:54		07:28 (B17)	04:50		07:29 (B17)	04:25		07:45 (B17)
	16:23			17:32			18:32		20:37	79	08:47 (B17)	21:36	69	08:38 (B17)	22:10	44	08:29 (B17)
23	08:30			07:26			06:13		05:52		07:28 (B17)	04:48		07:28 (B17)	04:25		07:45 (B17)
	16:26			17:34			18:34		20:39	80	08:48 (B17)	21:38	69	08:37 (B17)	22:10	44	08:29 (B17)
24	08:29		09:09 (B2)	07:23			06:10		05:49		07:28 (B17)	04:46		07:29 (B17)	04:26		07:44 (B17)
	16:28	10	09:19 (B2)	17:36			18:36		20:41	80	08:48 (B17)	21:40	68	08:37 (B17)	22:10	45	08:29 (B17)
25	08:27		09:06 (B2)	07:21			06:07		05:47		07:27 (B17)	04:45		07:30 (B17)	04:26		07:45 (B17)
	16:30	15	09:21 (B2)	17:39			18:38		20:43	81	08:48 (B17)	21:42	67	08:37 (B17)	22:10	45	08:30 (B17)
26	08:25		09:05 (B2)	07:18			06:05		05:44		07:26 (B17)	04:43		07:30 (B17)	04:27		07:45 (B17)
	16:32	18	09:23 (B2)	17:41			18:40		20:45	82	08:48 (B17)	21:43	65	08:35 (B17)	22:10	44	08:29 (B17)
27	08:24		09:04 (B2)	07:16			06:02		05:42		07:26 (B17)	04:42		07:31 (B17)	04:27		07:45 (B17)
	16:34	21	09:25 (B2)	17:43			18:42		20:47	82	08:48 (B17)	21:45	64	08:35 (B17)	22:10	45	08:30 (B17)
28	08:22		09:03 (B2)	07:13			05:59		05:39		07:26 (B17)	04:41		07:32 (B17)	04:28		07:45 (B17)
	16:36	23	09:26 (B2)	17:45			18:45		20:49	82	08:48 (B17)	21:47	63	08:35 (B17)	22:10	45	08:30 (B17)
29	08:20		09:02 (B2)				06:57		05:37		07:25 (B17)	04:39		07:32 (B17)	04:28		07:45 (B17)
	16:38	25	09:27 (B2)				19:47		20:51	83	08:48 (B17)	21:48	62	08:34 (B17)	22:10	46	08:31 (B17)
30	08:18		09:02 (B2)				06:54		05:35		07:25 (B17)	04:38		07:33 (B17)	04:29		07:44 (B17)
	16:41	26	09:28 (B2)				19:49		20:53	83	08:48 (B17)	21:50	61	08:34 (B17)	22:09	47	08:31 (B17)
31	08:17		09:01 (B2)				06:51					04:37		07:34 (B17)			
	16:43	28	09:29 (B2)				19:51					21:51	59	08:33 (B17)			
Potential sun hours		235		266			366		426			508			529		
Total, worst case		760		454					1776			2292				1439	
Sun reduction		0.13		0.20					0.50			0.57				0.56	
Oper. time red.		0.98		0.98					0.98			0.98				0.98	
Wind dir. red.		0.62		0.59					0.65			0.65				0.65	
Total reduction		0.08		0.11					0.32			0.36				0.35	
Total, real		61		52					561			822				507	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Vipmali - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (115)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July		August		September		October		November		December							
1	04:30	07:44 (B17)	05:15	07:35 (B17)	06:17	07:42 (B17)	07:17	07:22	08:31 (B2)	08:24	12:27 (B1)							
2	22:09	48	08:32 (B17)	21:28	79	08:54 (B17)	20:14	58	08:40 (B17)	18:53	16:36	29	09:00 (B2)	15:45	28	12:55 (B1)		
	04:31		07:44 (B17)	05:17		07:35 (B17)	06:19		07:43 (B17)	07:19	07:25		08:30 (B2)	08:26		12:26 (B1)		
3	22:09	49	08:33 (B17)	21:26	80	08:55 (B17)	20:11	55	08:38 (B17)	18:51	16:34	30	09:00 (B2)	15:44	30	12:56 (B1)		
	04:31		07:44 (B17)	05:19		07:35 (B17)	06:21		07:45 (B17)	07:21	07:27		08:30 (B2)	08:28		12:25 (B1)		
4	22:08	50	08:34 (B17)	21:24	80	08:55 (B17)	20:09	51	08:36 (B17)	18:48	16:31	31	09:01 (B2)	15:43	31	12:56 (B1)		
	04:32		07:44 (B17)	05:21		07:34 (B17)	06:23		07:45 (B17)	07:23	07:29		08:30 (B2)	08:29		12:26 (B1)		
5	22:07	51	08:35 (B17)	21:22	81	08:55 (B17)	20:06	47	08:32 (B17)	18:45	16:29	31	09:01 (B2)	15:42	31	12:57 (B1)		
	04:33		07:44 (B17)	05:23		07:34 (B17)	06:25		07:48 (B17)	07:25	07:31		08:29 (B2)	08:31		10:19 (B4)		
6	22:07	51	08:35 (B17)	21:19	81	08:55 (B17)	20:03	42	08:30 (B17)	18:43	16:27	32	09:01 (B2)	15:41	38	12:58 (B1)		
	04:34		07:44 (B17)	05:25		07:34 (B17)	06:27		07:50 (B17)	07:27	07:33		08:30 (B2)	08:32		10:18 (B4)		
7	22:06	52	08:36 (B17)	21:17	82	08:56 (B17)	20:01	37	08:27 (B17)	18:40	16:25	31	09:01 (B2)	15:41	43	12:59 (B1)		
	04:35		07:44 (B17)	05:27		07:34 (B17)	06:29		07:53 (B17)	07:29	07:36		08:30 (B2)	08:34		10:17 (B4)		
8	22:05	53	08:37 (B17)	21:15	82	08:56 (B17)	19:58	30	08:23 (B17)	18:38	16:23	31	09:01 (B2)	15:40	44	12:59 (B1)		
	04:37		07:43 (B17)	05:29		07:34 (B17)	06:31		07:58 (B17)	07:31	07:38		08:31 (B2)	08:35		10:17 (B4)		
9	22:04	55	08:38 (B17)	21:13	82	08:56 (B17)	19:55	19	08:17 (B17)	18:35	16:21	30	09:01 (B2)	15:39	47	13:00 (B1)		
	04:38		07:43 (B17)	05:31		07:34 (B17)	06:33			07:34	07:40		08:31 (B2)	08:37		10:16 (B4)		
10	22:03	55	08:38 (B17)	21:11	83	08:57 (B17)	19:53			18:32	16:19	30	09:01 (B2)	15:39	49	13:00 (B1)		
	04:39		07:42 (B17)	05:33		07:33 (B17)	06:35			07:36	07:42		08:31 (B2)	08:38		10:16 (B4)		
11	22:02	57	08:39 (B17)	21:08	83	08:56 (B17)	19:50			18:30	16:17	29	09:00 (B2)	15:39	50	13:01 (B1)		
	04:40		07:42 (B17)	05:35		07:33 (B17)	06:37			07:38	07:44		08:32 (B2)	08:39		10:16 (B4)		
12	22:01	58	08:40 (B17)	21:06	83	08:56 (B17)	19:47			18:27	16:15	28	09:00 (B2)	15:38	52	13:02 (B1)		
	04:42		07:41 (B17)	05:37		07:33 (B17)	06:39			07:40	07:46		08:32 (B2)	08:40		10:17 (B4)		
13	22:00	59	08:40 (B17)	21:04	83	08:56 (B17)	19:45			18:24	16:13	27	08:59 (B2)	15:38	53	13:03 (B1)		
	04:43		07:42 (B17)	05:39		07:33 (B17)	06:41			07:42	07:49		08:34 (B2)	08:42		10:17 (B4)		
14	21:59	60	08:42 (B17)	21:01	83	08:56 (B17)	19:42			18:22	16:11	25	08:59 (B2)	15:38	53	13:03 (B1)		
	04:45		07:41 (B17)	05:41		07:33 (B17)	06:43			07:44	07:51		08:35 (B2)	08:43		10:17 (B4)		
15	21:58	61	08:42 (B17)	20:59	83	08:56 (B17)	19:39			18:19	16:09	23	08:58 (B2)	15:38	54	13:04 (B1)		
	04:46		07:40 (B17)	05:43		07:34 (B17)	06:45			07:46	07:53		08:36 (B2)	08:44		10:17 (B4)		
16	21:57	63	08:43 (B17)	20:57	82	08:56 (B17)	19:37			18:17	16:07	21	08:57 (B2)	15:38	55	13:04 (B1)		
	04:47		07:41 (B17)	05:45		07:33 (B17)	06:47			07:48	07:55		08:38 (B2)	08:45		10:17 (B4)		
17	21:55	63	08:44 (B17)	20:54	82	08:55 (B17)	19:34			18:14	16:06	18	08:56 (B2)	15:38	57	13:05 (B1)		
	04:49		07:40 (B17)	05:47		07:33 (B17)	06:49			07:50	07:57		08:39 (B2)	08:46		10:18 (B4)		
18	21:54	65	08:45 (B17)	20:52	81	08:54 (B17)	19:31			18:12	16:04	15	08:54 (B2)	15:38	55	13:05 (B1)		
	04:51		07:39 (B17)	05:49		07:33 (B17)	06:51			07:52	07:59		08:43 (B2)	08:46		10:18 (B4)		
19	21:52	66	08:45 (B17)	20:49	81	08:54 (B17)	19:28			18:09	16:02	10	08:53 (B2)	15:38	56	13:06 (B1)		
	04:52		07:39 (B17)	05:51		07:34 (B17)	06:53			07:54	08:01			08:47		10:19 (B4)		
20	21:51	67	08:46 (B17)	20:47	80	08:54 (B17)	19:26			18:07	16:01			15:38	57	13:07 (B1)		
	04:54		07:38 (B17)	05:53		07:34 (B17)	06:55			07:57	08:03			08:48		10:18 (B4)		
21	21:49	69	08:47 (B17)	20:45	79	08:53 (B17)	19:23			18:04	15:59			15:38	58	13:07 (B1)		
	04:56		07:39 (B17)	05:55		07:34 (B17)	06:57			07:59	08:05			08:48		10:19 (B4)		
22	21:48	69	08:48 (B17)	20:42	79	08:53 (B17)	19:20			18:02	15:57			15:39	58	13:08 (B1)		
	04:57		07:39 (B17)	05:57		07:35 (B17)	06:59			08:01	08:07			08:49		10:19 (B4)		
23	21:46	70	08:49 (B17)	20:40	77	08:52 (B17)	19:18			17:59	15:56			15:39	57	13:07 (B1)		
	04:59		07:38 (B17)	05:59		07:35 (B17)	07:01			08:03	08:09			08:50		10:20 (B4)		
24	21:45	71	08:49 (B17)	20:37	76	08:51 (B17)	19:15			17:57	15:54			15:40	58	13:09 (B1)		
	05:01		07:38 (B17)	06:01		07:36 (B17)	07:03			08:05	08:11		12:33 (B1)	08:50		10:21 (B4)		
25	21:43	72	08:50 (B17)	20:35	75	08:51 (B17)	19:12			17:54	15:53	10	12:43 (B1)	15:40	57	13:09 (B1)		
	05:02		07:37 (B17)	06:03		07:35 (B17)	07:05			07:07	08:13		12:31 (B1)	08:50		10:21 (B4)		
26	21:41	73	08:50 (B17)	20:32	74	08:49 (B17)	19:10			16:52	10	08:50 (B2)	15:52	15	12:46 (B1)	15:41	57	13:09 (B1)
	05:04		07:37 (B17)	06:05		07:36 (B17)	07:07			07:09	08:38 (B2)	08:15		12:29 (B1)	08:51		10:21 (B4)	
27	21:39	74	08:51 (B17)	20:29	72	08:48 (B17)	19:07			16:50	16	08:54 (B2)	15:50	19	12:48 (B1)	15:42	56	13:09 (B1)
	05:06		07:37 (B17)	06:07		07:37 (B17)	07:09			07:12	08:35 (B2)	08:17		12:29 (B1)	08:51		10:22 (B4)	
28	21:38	75	08:52 (B17)	20:27	70	08:47 (B17)	19:04			16:47	21	08:56 (B2)	15:49	21	12:50 (B1)	15:42	56	13:10 (B1)
	05:08		07:36 (B17)	06:09		07:37 (B17)	07:11			07:14	08:34 (B2)	08:19		12:28 (B1)	08:51		10:23 (B4)	
29	21:36	76	08:52 (B17)	20:24	69	08:46 (B17)	19:01			16:45	23	08:57 (B2)	15:48	24	12:52 (B1)	15:43	55	13:10 (B1)
	05:10		07:36 (B17)	06:11		07:38 (B17)	07:13			07:16	08:33 (B2)	08:21		12:27 (B1)	08:51		10:23 (B4)	
30	21:34	77	08:53 (B17)	20:22	66	08:44 (B17)	18:59			16:43	25	08:58 (B2)	15:47	26	12:53 (B1)	15:44	56	13:11 (B1)
	05:12		07:36 (B17)	06:13		07:39 (B17)	07:15			07:18	08:32 (B2)	08:22		12:27 (B1)	08:51		10:24 (B4)	
31	21:32	78	08:54 (B17)	20:19	64	08:43 (B17)	18:56			16:40	27	08:59 (B2)	15:46	27	12:54 (B1)	15:45	55	13:11 (B1)
	05:14		07:35 (B17)	06:15		07:40 (B17)				07:20	08:31 (B2)				08:51		10:25 (B4)	
Potential sun hours	529		08:53 (B17)	20:17	61	08:41 (B17)			16:38	28	08:59 (B2)				15:46	54	13:12 (B1)	
Total, worst case	1965			2413			339		150		613				1560			
Sun reduction	0.49			0.50			0.43		0.26		0.08				0.07			
Oper. time red.	0.98			0.98			0.98		0.98		0.98				0.98			
Wind dir. red.	0.65			0.65			0.65		0.59		0.60				0.63			
Total reduction	0.31			0.31			0.27		0.15		0.05				0.04			
Total, real	611			759			91		22		29				67			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Zalumi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (178)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:56	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:05	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:06	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:23	04:26 22:07	04:47 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:44 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:29	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:35 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:38	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	07:10 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:37	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Zemturi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (39)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Zemites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (194)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:33	08:25 15:44
3	08:50 15:50	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
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16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:15	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:38	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:46
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ziedini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (111)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	09:39 (B22) 16:45	08:15 16:45	09:43 (B22) 17:48	07:11 19:53	06:49 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:17 16:36
2	08:51 15:49	09:39 (B22) 16:47	08:13 16:47	09:45 (B22) 17:50	07:08 19:55	06:46 20:58	05:30 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34
3	08:50 15:51	09:39 (B22) 16:50	08:11 16:50	09:46 (B22) 17:52	07:06 19:57	06:43 21:00	05:28 21:55	04:32 22:06	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32
4	08:50 15:52	09:38 (B22) 16:52	08:09 16:52	09:49 (B22) 17:54	07:03 19:59	06:41 21:02	05:26 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29
5	08:49 15:53	09:38 (B22) 16:54	08:07 16:54	09:53 (B22) 17:56	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
6	08:49 15:55	09:38 (B22) 16:56	08:05 16:56	09:53 (B22) 17:58	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
7	08:48 15:56	09:38 (B22) 16:57	08:04 16:57	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
8	08:48 15:58	09:37 (B22) 17:01	08:01 17:01	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
9	08:47 15:59	09:37 (B22) 17:03	07:58 17:03	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
10	08:46 16:01	09:37 (B22) 17:05	07:56 17:05	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
11	08:45 16:03	09:37 (B22) 17:08	07:54 17:08	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
12	08:44 16:04	09:37 (B22) 17:10	07:52 17:10	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
13	08:43 16:06	09:36 (B22) 17:12	07:50 17:12	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
14	08:42 16:08	09:37 (B22) 17:14	07:47 17:14	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
15	08:41 16:10	09:37 (B22) 17:17	07:45 17:17	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
16	08:40 16:12	09:37 (B22) 17:19	07:43 17:19	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
17	08:39 16:14	09:37 (B22) 17:21	07:40 17:21	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
18	08:38 16:16	09:37 (B22) 17:23	07:38 17:23	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
19	08:36 16:18	09:37 (B22) 17:26	07:36 17:26	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
20	08:35 16:20	09:37 (B22) 17:28	07:33 17:28	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
21	08:33 16:22	09:37 (B22) 17:30	07:31 17:30	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
22	08:32 16:24	09:37 (B22) 17:32	07:28 17:32	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
23	08:30 16:26	09:37 (B22) 17:34	07:26 17:34	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
24	08:29 16:28	09:37 (B22) 17:36	07:23 17:36	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
25	08:27 16:30	09:37 (B22) 17:38	07:21 17:38	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
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27	08:24 16:34	09:37 (B22) 17:43	07:16 17:43	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
28	08:22 16:36	09:37 (B22) 17:45	07:13 17:45	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
29	08:20 16:39	09:37 (B22) 17:47	07:11 17:47	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
30	08:19 16:41	09:37 (B22) 17:49	07:09 17:49	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
31	08:17 16:43	09:37 (B22) 17:51	07:07 17:51	09:53 (B22) 17:59	07:01 19:53	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	812	85									684	267
Sun reduction	0.13	0.20									0.08	0.07
Oper. time red.	0.98	0.98									0.98	0.98
Wind dir. red.	0.61	0.61									0.61	0.61
Total reduction	0.08	0.12									0.05	0.04
Total, real	64	10									34	11

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ziemeli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (125)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48		06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14		07:17 18:54	19	07:46 (B14) 08:05 (B14)	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50		06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11		07:19 18:51	15	07:48 (B14) 08:03 (B14)	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52		06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09		07:21 18:48	11	07:50 (B14) 08:01 (B14)	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54		06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06		07:23 18:46	6	07:52 (B14) 07:58 (B14)	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56		06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04		07:26 18:43			07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58		06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01		07:28 18:40			07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01		06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58		07:30 18:38			07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03		06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56		07:32 18:35			07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05		06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53		07:34 18:33			07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	2	07:18 (B14) 20:10	05:13 21:12	04:28 22:02	04:40 22:03	05:33 21:11	06:35 19:53		07:36 18:33			07:42 16:19	08:38 15:39
11	08:45 16:03	07:54 18:08	06:45 18:09	9	07:22 (B14) 20:12	05:11 21:14	04:27 22:03	04:41 22:02	05:35 21:08	06:37 19:50		07:38 18:30			07:44 16:17	08:39 15:39
12	08:44 16:03	07:52 18:09	06:42 18:11	14	07:24 (B14) 20:14	05:09 21:16	04:27 22:04	04:42 22:01	05:37 21:06	06:39 19:48		07:40 18:27			07:46 16:15	08:40 15:39
13	08:43 16:06	07:50 18:13	06:40 18:13	18	07:26 (B14) 20:16	05:07 21:18	04:27 22:05	04:44 22:00	05:39 21:04	06:41 19:45		07:42 18:25			07:49 16:13	08:42 15:38
14	08:42 16:08	07:47 18:16	06:37 18:16	21	07:26 (B14) 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39		07:44 18:20			07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 18:18	06:34 18:18	24	07:26 (B14) 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37		07:46 18:17			07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 18:20	06:32 18:20	25	07:27 (B14) 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34		07:48 18:15			07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 18:22	06:29 18:22	26	07:27 (B14) 20:26	05:00 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31		07:50 18:12			07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 18:24	06:26 18:24	25	07:26 (B14) 20:28	05:04 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:57 (B14)	07:53 18:09	4	08:01 (B14)	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 18:26	06:24 18:26	26	07:26 (B14) 20:31	05:02 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:52 (B14)	07:55 18:07	13	08:05 (B14)	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 18:28	06:21 18:28	25	07:26 (B14) 20:33	05:09 21:33	04:54 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:50 (B14)	07:57 18:04	17	08:07 (B14)	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 18:30	06:18 18:30	24	07:25 (B14) 20:35	05:07 21:35	04:52 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:48 (B14)	07:59 18:02	20	08:08 (B14)	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 18:32	06:16 18:32	22	07:24 (B14) 20:37	05:05 21:37	04:50 22:10	04:58 21:46	05:57 20:40	06:59 19:18	07:47 (B14)	08:01 18:00	22	08:09 (B14)	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 18:34	06:13 18:34	21	07:23 (B14) 20:39	05:52 21:38	04:48 22:10	04:59 21:45	05:59 20:37	07:01 19:15	07:45 (B14)	08:03 17:57	24	08:10 (B14)	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 18:36	06:10 18:36	18	07:21 (B14) 20:41	05:49 21:40	04:47 22:10	04:59 21:43	06:01 20:35	07:03 19:12	07:45 (B14)	08:05 17:55	25	08:11 (B14)	08:11 15:53	08:51 15:41
25	08:27 16:30	07:21 18:39	06:08 18:39	14	07:18 (B14) 20:43	05:47 21:42	04:45 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:44 (B14)	08:07 16:52	26	08:12 (B14)	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 18:41	06:05 18:41	7	07:15 (B14) 20:45	05:44 21:43	04:44 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:43 (B14)	08:10 16:50	27	08:13 (B14)	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 18:43	06:02 18:43		05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:43 (B14)	08:12 16:48	28	08:14 (B14)	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 18:45	06:00 18:45		05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:43 (B14)	08:14 16:45	29	08:15 (B14)	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47		05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:43 (B14)	08:16 16:43	25	08:16 (B14)	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49		05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:44 (B14)	08:18 16:41	24	08:17 (B14)	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		05:33 21:51	04:37 21:51	04:27 22:10	05:14 21:30	06:15 20:17		07:17 17:38	08:19 16:38	22	08:18 (B14)	08:24 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	528	529	469	385		324		247	216	
Total, worst case			321							274		51				
Sun reduction			0.41							0.43		0.26				
Oper. time red.			0.98							0.98		0.98				
Wind dir. red.			0.63							0.63		0.63				
Total reduction			0.25							0.26		0.16				
Total, real			81							72		8				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ziemeļnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (27)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:32 20:55	04:36 21:52	05:46 (B12) 20:53 (B25)	04:30 22:09	20:19 (B25) 21:00 (B25)	05:16 21:28	05:53 (B12) 20:14	06:17 18:53	07:22 16:36	07:22 15:45
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	05:46 (B12) 20:53 (B25)	04:31 22:08	20:19 (B25) 21:00 (B25)	05:18 21:26	05:54 (B12) 20:11	06:19 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	05:47 (B12) 20:53 (B25)	04:32 22:08	20:20 (B25) 21:00 (B25)	05:19 21:23	05:55 (B12) 20:09	06:21 18:48	07:21 16:32	07:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	05:48 (B12) 20:53 (B25)	04:33 22:07	05:59 (B12) 21:01 (B25)	05:21 21:21	05:56 (B12) 20:06	06:23 18:45	07:23 16:29	07:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:58	05:49 (B12) 20:54 (B25)	04:34 22:06	05:58 (B12) 21:01 (B25)	05:23 21:19	05:57 (B12) 20:03	06:25 18:43	07:25 16:27	07:31 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	05:50 (B12) 20:54 (B25)	04:35 22:06	05:57 (B12) 21:01 (B25)	05:25 21:17	06:00 (B12) 20:43	06:27 18:40	07:27 16:25	07:33 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 21:57	05:51 (B12) 20:54 (B25)	04:36 22:05	05:56 (B12) 21:01 (B25)	05:27 21:15	06:29 (B24) 20:41	06:29 18:38	07:29 16:23	07:35 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	05:52 (B12) 20:55 (B25)	04:37 22:04	05:55 (B12) 21:01 (B25)	05:29 21:13	06:31 (B24) 20:40	07:31 18:35	07:38 16:21	07:40 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 22:02	05:54 (B12) 20:55 (B25)	04:38 22:03	05:55 (B12) 21:01 (B25)	05:31 21:10	06:33 18:32	07:33 16:19	07:40 15:39	07:40 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 22:03	05:54 (B12) 20:56 (B25)	04:39 22:02	05:54 (B12) 21:00 (B25)	05:33 21:08	06:35 18:30	07:36 16:17	07:42 15:39	07:42 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:10 21:15	04:27 22:04	05:53 (B12) 20:55 (B25)	04:41 22:01	05:53 (B12) 21:00 (B25)	05:35 21:06	06:37 18:27	07:38 16:15	07:44 15:38	07:44 15:38
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:08 21:17	04:27 22:05	05:52 (B12) 20:56 (B25)	04:42 22:00	05:54 (B12) 21:01 (B25)	05:37 21:04	06:39 18:25	07:40 16:13	07:46 15:38	07:46 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	05:51 (B12) 20:57 (B25)	04:43 22:01	05:53 (B12) 21:00 (B25)	05:39 21:01	06:41 18:22	07:42 16:11	07:48 15:38	07:48 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	05:52 (B12) 20:57 (B25)	04:45 21:58	05:52 (B12) 21:00 (B25)	05:41 20:59	06:43 18:19	07:44 16:09	07:50 15:38	07:50 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	05:51 (B12) 20:57 (B25)	04:46 21:56	05:52 (B12) 21:00 (B25)	05:43 20:57	06:45 18:17	07:53 16:08	07:53 15:38	07:53 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:25 22:08	05:51 (B12) 20:57 (B25)	04:48 21:55	05:52 (B12) 21:00 (B25)	05:45 20:54	06:47 18:14	07:55 16:06	07:55 15:38	07:55 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	05:51 (B12) 20:57 (B25)	04:49 21:54	05:51 (B12) 21:00 (B25)	05:47 20:52	06:49 18:12	07:50 16:04	07:57 15:38	07:57 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	05:51 (B12) 20:57 (B25)	04:51 21:52	05:52 (B12) 21:00 (B25)	05:49 20:49	06:51 18:09	07:52 16:02	07:59 15:38	07:59 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	05:51 (B12) 20:58 (B25)	04:52 21:51	05:51 (B12) 21:00 (B25)	05:51 20:47	06:53 18:07	07:54 16:01	08:01 15:38	08:01 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	05:51 (B12) 20:58 (B25)	04:54 21:49	05:51 (B12) 21:00 (B25)	05:53 20:44	06:55 18:04	07:56 15:59	08:03 15:39	08:03 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	05:51 (B12) 20:59 (B25)	04:56 21:48	05:51 (B12) 21:00 (B25)	05:55 20:42	06:57 18:02	07:59 15:58	08:05 15:39	08:05 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	05:51 (B12) 20:59 (B25)	04:57 21:46	05:51 (B12) 21:00 (B25)	05:57 20:39	06:59 18:01	08:01 15:56	08:07 15:39	08:07 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	05:51 (B12) 20:59 (B25)	04:59 21:44	05:50 (B12) 21:00 (B25)	05:59 20:37	07:01 18:03	08:03 15:55	08:09 15:40	08:09 15:40
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:51 (B12) 20:59 (B25)	05:01 21:43	05:51 (B12) 21:00 (B25)	06:01 20:34	07:03 18:05	08:05 15:53	08:11 15:41	08:11 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:52 (B12) 20:59 (B25)	05:03 21:41	05:50 (B12) 21:00 (B25)	06:03 20:32	07:05 18:02	07:07 16:52	08:13 15:52	08:13 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:52 (B12) 20:59 (B25)	05:04 21:39	05:51 (B12) 21:00 (B24)	06:05 20:29	07:07 18:00	07:09 16:50	08:15 15:51	08:15 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:52 (B12) 20:59 (B25)	05:06 21:37	05:51 (B12) 21:00 (B24)	06:07 20:27	07:09 18:04	07:11 16:47	08:17 15:49	08:17 15:43
28	08:22 16:36	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:53 (B12) 20:59 (B25)	05:08 21:35	05:51 (B12) 21:00 (B24)	06:09 20:24	07:11 18:01	07:14 16:45	08:19 15:48	08:19 15:44
29	08:20 16:39	07:15 17:47	05:57 18:47	05:37 20:51	04:40 21:48	04:29 22:09	05:54 (B12) 20:51 (B25)	05:10 21:33	05:51 (B12) 21:00 (B24)	06:11 20:22	07:13 18:03	07:16 16:43	08:20 15:47	08:20 15:45
30	08:18 16:41	07:18 17:54	05:54 18:49	05:35 20:53	04:38 21:49	04:29 22:09	05:44 (B12) 20:52 (B25)	05:12 21:32	05:52 (B12) 21:00 (B24)	06:13 20:19	07:15 18:06	07:18 16:40	08:22 15:46	08:22 15:46
31	08:16 16:43	07:16 17:51	06:51 19:51	06:37 21:51	04:37 21:57	04:29 22:09	05:45 (B12) 20:52 (B25)	05:14 21:30	05:53 (B12) 20:49 (B24)	06:15 20:16	07:20 16:38	07:20 16:38	08:51 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216		
Total, worst case					1320		1335	1649		249				
Sun reduction					0.57		0.56	0.49		0.50				
Oper. time red.					0.98		0.98	0.98		0.98				
Wind dir. red.					0.64		0.63	0.64		0.64				
Total reduction					0.36		0.34	0.31		0.31				
Total, real					471		457	508		78				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Zvirgzdini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (24)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:57	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:37 22:03	05:31 21:11	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:07	06:24 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:52 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:04	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:12 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:50 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:46	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Zilites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (97)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January				February				March				April				May				June			
1	08:51		12:56 (B22)	08:15	07:11								06:49				05:32			06:25 (B1)	04:36			
	15:48	17	13:13 (B22)	16:45	17:47								19:53				20:55	39		07:04 (B1)	21:53			
2	08:50		12:58 (B22)	08:13	07:08								06:46				05:30			06:25 (B1)	04:35			
	15:49	15	13:13 (B22)	16:47	17:50								19:55				20:57	39		07:04 (B1)	21:54			
3	08:50		12:59 (B22)	08:11	07:06								06:43				05:28			06:24 (B1)	04:34			
	15:51	14	13:13 (B22)	16:50	17:52								19:57				21:00	40		07:04 (B1)	21:55			
4	08:50		13:00 (B22)	08:09	07:03								06:41				05:26			06:24 (B1)	04:33			
	15:52	12	13:12 (B22)	16:52	17:54								19:59				21:02	40		07:04 (B1)	21:57			
5	08:49		13:02 (B22)	08:07	07:00								06:38				05:23			06:24 (B1)	04:32			
	15:53	9	13:11 (B22)	16:54	17:56								20:01				21:04	40		07:04 (B1)	21:58			
6	08:49		13:05 (B22)	08:05	06:58								06:35				05:21			06:24 (B1)	04:31			
	15:55	4	13:09 (B22)	16:56	17:58								20:03				21:06	40		07:04 (B1)	21:59			
7	08:48			08:03	06:55								06:33				05:19			06:25 (B1)	04:30			
	15:56			16:59	18:00								20:05				21:08	38		07:03 (B1)	22:00			
8	08:48			08:00	06:53								06:30				05:17			06:25 (B1)	04:29			
	15:58			17:01	18:03								20:08				21:10	38		07:03 (B1)	22:01			
9	08:47			07:58	06:50								06:27				05:15			06:25 (B1)	04:28			
	15:59			17:03	18:05								20:10				21:12	37		07:02 (B1)	22:02			
10	08:46			07:56	06:47								06:25				05:13			06:25 (B1)	04:28			
	16:01			17:05	18:07								20:12				21:14	37		07:02 (B1)	22:03			
11	08:45			07:54	06:45								06:22				05:10			06:25 (B1)	04:27			
	16:03			17:08	18:09								20:14				21:16	36		07:01 (B1)	22:04			
12	08:44			07:52	06:42								06:20				05:08			06:26 (B1)	04:27			
	16:04			17:10	18:11								20:16				21:18	34		07:00 (B1)	22:05			
13	08:43			07:49	06:39								06:17				05:06			06:26 (B1)	04:26			
	16:06			17:12	18:13								20:18				21:20	34		07:00 (B1)	22:06			
14	08:42			07:47	06:37								06:14				05:04			06:28 (B1)	04:26			
	16:08			17:14	18:15								20:20				21:22	32		07:00 (B1)	22:07			
15	08:41			07:45	06:34								06:12				05:02			06:28 (B1)	04:26			
	16:10			17:17	18:17								20:22				21:24	31		06:59 (B1)	22:07			
16	08:40			07:43	06:32								06:57 (B4)				05:01			06:29 (B1)	04:25			
	16:12			17:19	18:20	6							07:03 (B4)				21:25	28		06:57 (B1)	22:08			
17	08:39			07:40	06:29								06:54 (B4)				04:59			06:30 (B1)	04:25			
	16:14			17:21	18:22	11							07:05 (B4)				21:27	27		06:57 (B1)	22:08			
18	08:37			07:38	06:26								06:51 (B4)				04:57			06:31 (B1)	04:25			
	16:16			17:23	18:24	15							07:06 (B4)				21:29	24		06:55 (B1)	22:09			
19	08:36			07:35	06:23								06:49 (B4)				04:55			06:32 (B1)	04:25			
	16:18			17:25	18:26	18							07:07 (B4)			4	06:49 (B1)	21:31	22	06:54 (B1)	22:09			
20	08:35			07:33	06:21								06:47 (B4)				06:39 (B1)	04:53		06:34 (B1)	04:25			
	16:20			17:28	18:28	20							07:07 (B4)			15	06:54 (B1)	21:33	19	06:53 (B1)	22:10			
21	08:33			07:31	06:18								06:46 (B4)				06:36 (B1)	04:52		06:35 (B1)	04:25			
	16:22			17:30	18:30	21							07:07 (B4)			21	06:57 (B1)	21:35	16	06:51 (B1)	22:10			
22	08:32			07:28	06:15								06:47 (B4)				06:34 (B1)	04:50		06:38 (B1)	04:25			
	16:24			17:32	18:32	21							07:08 (B4)			25	06:59 (B1)	21:36	11	06:49 (B1)	22:10			
23	08:30			07:26	06:13								06:46 (B4)				06:32 (B1)	04:48		06:42 (B1)	04:26			
	16:26			17:34	18:34	21							07:07 (B4)			27	06:59 (B1)	21:38	2	06:44 (B1)	22:10			
24	08:29			07:23	06:10								06:46 (B4)				06:31 (B1)	04:47			04:26			
	16:28			17:37	18:36	20							07:06 (B4)			30	07:01 (B1)	21:40			22:10			
25	08:27			07:21	06:07								06:46 (B4)				06:30 (B1)	04:45			04:26			
	16:30			17:39	18:38	19							07:05 (B4)			32	07:02 (B1)	21:42			22:10			
26	08:26			07:18	06:05								06:47 (B4)				06:28 (B1)	04:44			04:27			
	16:32			17:41	18:40	17							07:04 (B4)			34	07:02 (B1)	21:43			22:10			
27	08:24			07:16	06:02								06:48 (B4)				06:27 (B1)	04:42			04:27			
	16:34			17:43	18:43	14							07:02 (B4)			36	07:03 (B1)	21:45			22:10			
28	08:22			07:13	05:59								06:49 (B4)				06:27 (B1)	04:41			04:28			
	16:36			17:45	18:45	10							06:59 (B4)			36	07:03 (B1)	21:47			22:10			
29	08:20				06:57												06:26 (B1)	04:39			04:28			
	16:39				19:47								20:51			38	07:04 (B1)	21:48			22:10			
30	08:18				06:54								05:35				06:25 (B1)	04:38			04:29			
	16:41				19:49								20:53			38	07:03 (B1)	21:50			22:09			
31	08:17				06:51													04:37						
	16:43				19:51													21:51						
Potential sun hours	235			266	366								426				508				529			
Total, worst case		71							213										704					
Sun reduction		0.13							0.41										0.57					
Oper. time red.		0.98							0.98										0.98					
Wind dir. red.		0.64							0.64										0.65					
Total reduction		0.08							0.26										0.36					
Total, real		6							55										254					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Zilites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (97)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July		August		September		October	November	December
1	04:30		05:16	06:36 (B1)	06:17		07:17	07:23	08:24
	22:09		21:28	35 07:11 (B1)	20:14		18:54	16:36	15:45
2	04:31		05:17	06:36 (B1)	06:19		07:19	07:25	08:26
	22:09		21:26	36 07:12 (B1)	20:11		18:51	16:34	15:44
3	04:32		05:19	06:35 (B1)	06:21		07:21	07:27	08:28
	22:08		21:24	37 07:12 (B1)	20:09		18:48	16:31	15:43
4	04:33		05:21	06:35 (B1)	06:23		07:23	07:29	08:29
	22:07		21:22	38 07:13 (B1)	20:06		18:46	16:29	15:42
5	04:34		05:23	06:34 (B1)	06:25		07:25	07:31	08:31
	22:07		21:19	38 07:12 (B1)	20:03		18:43	16:27	15:42
6	04:35		05:25	06:34 (B1)	06:27		07:27	07:33	08:32
	22:06		21:17	39 07:13 (B1)	20:01		18:40	16:25	15:41
7	04:36		05:27	06:34 (B1)	06:29		07:29	07:36	08:34
	22:05		21:15	39 07:13 (B1)	19:58		18:38	16:23	15:40
8	04:37		05:29	06:34 (B1)	06:31		07:32	07:38	08:35
	22:04		21:13	39 07:13 (B1)	19:55		18:35	16:21	15:40
9	04:38		05:31	06:34 (B1)	06:33		07:34	07:40	08:37
	22:03		21:11	39 07:13 (B1)	19:53		18:32	16:19	15:39
10	04:39		05:33	06:33 (B1)	06:35		07:36	07:42	08:38
	22:02		21:08	39 07:12 (B1)	19:50		18:30	16:17	15:39
11	04:41		05:35	06:33 (B1)	06:37		07:38	07:44	08:39
	22:01		21:06	39 07:12 (B1)	19:47		18:27	16:15	15:38
12	04:42		05:37	06:33 (B1)	06:39		07:40	07:46	08:40
	22:00		21:04	39 07:12 (B1)	19:45		18:25	16:13	15:38
13	04:43		05:39	06:34 (B1)	06:41		07:42	07:49	08:42
	21:59		21:01	38 07:12 (B1)	19:42		18:22	16:11	15:38
14	04:45		05:41	06:34 (B1)	06:43		07:44	07:51	08:43
	21:58		20:59	37 07:11 (B1)	19:39		18:19	16:09	15:38
15	04:46		05:43	06:34 (B1)	06:45	07:40 (B4)	07:46	07:53	08:44
	21:57		20:57	37 07:11 (B1)	19:37	9 07:49 (B4)	18:17	16:07	15:38
16	04:48		05:45	06:35 (B1)	06:47	07:37 (B4)	07:48	07:55	08:45
	21:55		20:54	35 07:10 (B1)	19:34	14 07:51 (B4)	18:14	16:06	15:38
17	04:49		05:47	06:35 (B1)	06:49	07:36 (B4)	07:50	07:57	08:46
	21:54		20:52	33 07:08 (B1)	19:31	17 07:53 (B4)	18:12	16:04	15:38
18	04:51		05:49	06:35 (B1)	06:51	07:34 (B4)	07:52	07:59	08:46
	21:52		20:50	32 07:07 (B1)	19:29	19 07:53 (B4)	18:09	16:02	15:38
19	04:52		05:51	06:36 (B1)	06:53	07:33 (B4)	07:55	08:01	08:47
	21:51		20:47	30 07:06 (B1)	19:26	21 07:54 (B4)	18:07	16:01	15:38
20	04:54		05:53	06:38 (B1)	06:55	07:33 (B4)	07:57	08:03	08:48
	21:49		20:45	27 07:05 (B1)	19:23	21 07:54 (B4)	18:04	15:59	15:38
21	04:56	06:49 (B1)	05:55	06:39 (B1)	06:57	07:32 (B4)	07:59	08:05	08:48
	21:48	8 06:57 (B1)	20:42	24 07:03 (B1)	19:20	21 07:53 (B4)	18:02	15:58	15:39
22	04:57	06:47 (B1)	05:57	06:41 (B1)	06:59	07:31 (B4)	08:01	08:07	08:49
	21:46	13 07:00 (B1)	20:40	20 07:01 (B1)	19:18	21 07:52 (B4)	17:59	15:56	15:39
23	04:59	06:44 (B1)	05:59	06:44 (B1)	07:01	07:31 (B4)	08:03	08:09	08:50
	21:45	18 07:02 (B1)	20:37	14 06:58 (B1)	19:15	20 07:51 (B4)	17:57	15:55	15:40
24	05:01	06:43 (B1)	06:01		07:03	07:31 (B4)	08:05	08:11	08:50
	21:43	21 07:04 (B1)	20:35		19:12	19 07:50 (B4)	17:55	15:53	15:40
25	05:03	06:41 (B1)	06:03		07:05	07:33 (B4)	07:07	08:13	08:50
	21:41	24 07:05 (B1)	20:32		19:10	16 07:49 (B4)	16:52	15:52	15:41
26	05:04	06:41 (B1)	06:05		07:07	07:36 (B4)	07:10	08:15	08:51
	21:39	25 07:06 (B1)	20:29		19:07	12 07:48 (B4)	16:50	15:51	15:42
27	05:06	06:40 (B1)	06:07		07:09	07:38 (B4)	07:12	08:17	08:51
	21:38	28 07:08 (B1)	20:27		19:04	8 07:46 (B4)	16:47	15:49	15:43
28	05:08	06:38 (B1)	06:09		07:11		07:14	08:19	08:51
	21:36	30 07:08 (B1)	20:24		19:02		16:45	15:48	15:44
29	05:10	06:38 (B1)	06:11		07:13		07:16	08:21	08:51
	21:34	31 07:09 (B1)	20:22		18:59		16:43	15:47	15:44
30	05:12	06:38 (B1)	06:13		07:15		07:18	08:22	08:51
	21:32	32 07:10 (B1)	20:19		18:56		16:40	15:46	15:45
31	05:14	06:37 (B1)	06:15				07:20		08:51
	21:30	34 07:11 (B1)	20:17				16:38		15:47
Potential sun hours	529		469		385		324	247	216
Total, worst case	264		784		218				475
Sun reduction	0.49		0.50		0.43				0.07
Oper. time red.	0.98		0.98		0.98				0.98
Wind dir. red.	0.65		0.65		0.64				0.64
Total reduction	0.31		0.32		0.27				0.04
Total, real	83		248		58				21

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Zilusala - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (150)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:58	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:34 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:10	04:29 22:04	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:06	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:21	04:26 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:26	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Abeles - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (153)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:04	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Arsmenieki (kad. apz. 76860060006001) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (196)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:04	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:58	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:51	06:49 19:31	07:50 18:12	07:56 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:25	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:00 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:38	06:07 18:38	05:47 20:42	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Arsmenieki (kad. apz. 76860060006008) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (200)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:04	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
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15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:51	06:49 19:31	07:50 18:12	07:56 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:25	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:00 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:38	06:07 18:38	05:47 20:42	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ergliš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (208)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

		January	February	March		April	May	June	July	August	September		October		November	December	
1	08:50 15:48	08:14 16:45	07:10 17:47			06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:27	06:17 20:14		07:17 18:53	22	17:57 (B3) 18:19 (B3)	07:22 16:35	08:24 15:44
2	08:50 15:49	08:12 16:47	07:08 17:49			06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:25	06:19 20:11		07:19 18:50	21	17:57 (B3) 18:18 (B3)	07:24 16:33	08:26 15:43
3	08:50 15:50	08:10 16:49	07:05 17:51			06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08		07:21 18:48	18	17:58 (B3) 18:16 (B3)	07:27 16:31	08:27 15:43
4	08:49 15:51	08:08 16:51	07:03 17:54			06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06		07:23 18:45	14	18:01 (B3) 18:15 (B3)	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56			06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03		07:25 18:42	7	18:04 (B3) 18:11 (B3)	07:31 16:27	08:30 15:41
6	08:48 15:54	08:04 16:56	06:57 17:58			06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00		07:27 18:40			07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00			06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58		07:29 18:37			07:35 16:23	08:33 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02			06:30 20:07	05:16 21:09	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55		07:31 18:35			07:37 16:20	08:35 15:39
9	08:46 15:59	07:58 17:03	06:50 18:04	11	17:24 (B3) 17:35 (B3)	06:27 20:09	05:14 21:11	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52		07:33 18:32			07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	16	17:22 (B3) 17:38 (B3)	06:24 20:11	05:12 21:13	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50		07:35 18:29			07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	19	17:20 (B3) 17:39 (B3)	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47		07:37 18:27			07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	22	17:18 (B3) 17:40 (B3)	06:19 20:15	05:08 21:17	04:26 22:05	04:41 22:00	05:37 21:03	06:39 19:44		07:39 18:24			07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	23	17:17 (B3) 17:40 (B3)	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42		07:41 18:22			07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	24	17:17 (B3) 17:41 (B3)	06:14 20:20	05:04 21:21	04:25 22:06	04:44 21:58	05:41 20:59	06:43 19:39		07:44 18:19			07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	25	17:16 (B3) 17:41 (B3)	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:56	06:45 19:36		07:46 18:16			07:52 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	25	17:15 (B3) 17:40 (B3)	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34		07:48 18:14			07:55 16:05	08:44 15:37
17	08:38 16:13	07:40 17:21	06:28 18:21	25	17:16 (B3) 17:41 (B3)	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31		07:50 18:11			07:57 16:04	08:45 15:37
18	08:37 16:15	07:37 17:23	06:26 18:23	25	17:15 (B3) 17:40 (B3)	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28		07:52 18:09			07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:25	24	17:15 (B3) 17:39 (B3)	06:01 20:30	04:55 21:31	04:25 22:09	05:51 21:51	06:53 20:47	06:53 19:25		07:54 18:06			08:01 16:00	08:47 15:38
20	08:34 16:19	07:33 17:27	06:20 18:28	21	17:17 (B3) 17:38 (B3)	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	18:07 (B3) 18:18 (B3)	07:56 18:04			08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	20	17:17 (B3) 17:37 (B3)	05:56 20:34	04:51 21:34	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	18:04 (B3) 18:20 (B3)	07:58 18:01			08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	17	17:18 (B3) 17:35 (B3)	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	18:02 (B3) 18:21 (B3)	08:01 17:59			08:07 15:56	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	12	17:20 (B3) 17:32 (B3)	05:51 20:38	04:48 21:38	04:25 22:10	05:59 20:37	07:01 19:15	07:01 18:22 (B3)	18:01 (B3) 18:22 (B3)	08:03 17:56			08:09 15:54	08:49 15:39
24	08:28 16:27	07:23 17:36	06:10 18:36			05:49 20:40	04:46 21:40	04:25 22:10	06:01 20:34	07:03 19:12	07:03 18:22 (B3)	17:59 (B3) 18:22 (B3)	08:05 17:54			08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38			05:46 20:43	04:45 21:41	04:26 22:10	06:02 21:41	07:05 20:32	07:05 19:09	17:58 (B3) 18:22 (B3)	07:07 16:52			08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:40	06:04 18:40			05:44 20:45	04:43 21:43	04:26 22:10	06:05 21:39	07:07 20:29	07:07 19:07	17:58 (B3) 18:22 (B3)	07:09 16:49			08:15 15:50	08:50 15:41
27	08:23 16:34	07:15 17:43	06:02 18:42			05:41 20:47	04:42 21:45	04:27 22:10	06:06 21:37	07:09 20:27	07:09 19:04	17:57 (B3) 18:22 (B3)	07:11 16:47			08:17 15:49	08:50 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44			05:39 20:49	04:40 21:46	04:27 22:10	06:08 21:35	07:11 20:24	07:11 19:01	17:57 (B3) 18:22 (B3)	07:13 16:45			08:18 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46			05:37 20:51	04:39 21:48	04:28 22:09	06:11 21:33	07:13 20:21	07:13 18:58	17:57 (B3) 18:21 (B3)	07:16 16:42			08:20 15:47	08:51 15:44
30	08:18 16:40		06:54 19:48			05:34 20:53	04:38 21:49	04:29 22:09	06:13 21:31	07:15 20:19	07:15 18:56	17:57 (B3) 18:20 (B3)	07:18 16:40			08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:50				04:36 21:51		05:13 21:29	06:15 20:16		07:20 16:38				08:51 15:46	
Potential sun hours	235	266	366			426	508	529	529	469	385		324		247	216	
Total, worst case				309							235			82			
Sun reduction				0.41							0.43			0.26			
Oper. time red.				0.98							0.98			0.98			
Wind dir. red.				0.65							0.65			0.65			
Total reduction				0.26							0.27			0.17			
Total, real				81							64			14			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ergli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (34)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:57	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:18	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:04	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:43		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Ives - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (96)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	07:41 (B14) 19:53	06:49 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:17 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	07:40 (B14) 19:55	06:46 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	06:19 18:51	07:19 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	07:40 (B14) 19:57	06:44 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:20 20:09	06:21 18:48	07:21 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	07:40 (B14) 19:59	06:41 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:22 20:06	06:23 18:46	07:23 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	07:39 (B14) 19:59	06:38 21:04	05:24 21:58	04:34 22:07	04:34 21:20	05:24 20:04	06:25 18:43	07:25 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	07:40 (B14) 19:55	06:36 21:06	05:21 21:59	04:35 22:06	04:35 21:17	05:25 20:01	06:27 18:40	07:28 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	07:40 (B14) 19:55	06:33 21:08	05:19 22:00	04:36 22:05	04:36 21:15	05:27 19:58	06:29 18:38	07:30 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	07:41 (B14) 19:57	06:30 21:10	05:17 22:01	04:37 22:04	04:37 21:13	05:29 19:56	06:31 18:35	07:32 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	07:42 (B14) 19:58	06:28 21:12	05:15 22:02	04:38 22:03	04:38 21:11	05:31 19:53	06:33 18:33	07:34 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	07:43 (B14) 19:59	06:25 21:14	05:13 22:03	04:40 22:02	04:40 21:08	05:33 19:50	06:35 18:30	07:36 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	07:45 (B14) 19:57	06:22 21:16	05:11 22:04	04:41 22:01	04:41 21:06	05:35 19:48	06:37 18:27	07:38 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	07:45 (B14) 19:57	06:20 21:18	05:09 22:05	04:42 22:00	04:42 21:04	05:37 19:45	06:39 18:25	07:40 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	07:46 (B14) 19:57	06:17 21:20	05:07 22:06	04:44 21:59	04:44 21:02	05:39 19:42	06:41 18:22	07:42 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	07:47 (B14) 19:57	06:15 21:22	05:05 22:07	04:45 21:58	04:45 20:59	05:41 19:39	06:43 18:20	07:44 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	07:48 (B14) 19:57	06:12 21:24	05:03 22:07	04:46 21:57	04:46 20:57	05:43 19:37	06:45 18:17	07:46 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	07:49 (B14) 19:57	06:09 21:26	05:01 22:08	04:48 21:55	04:48 20:54	05:45 19:34	06:47 18:15	07:48 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	07:50 (B14) 19:57	06:07 21:27	04:59 22:08	04:49 21:54	04:49 20:52	05:47 19:31	06:49 18:12	07:50 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	07:51 (B14) 19:57	06:04 21:29	04:57 22:09	04:51 21:52	04:51 20:50	05:49 19:29	06:51 18:09	07:53 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	07:52 (B14) 19:57	06:02 21:31	04:55 22:09	04:53 21:51	04:53 20:47	05:51 19:26	06:53 18:07	07:55 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	07:53 (B14) 19:57	05:59 21:33	04:53 22:10	04:54 21:49	04:54 20:45	05:53 19:23	06:55 18:04	07:57 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	07:54 (B14) 19:57	05:57 21:35	04:52 22:10	04:56 21:48	04:56 20:42	05:55 19:21	06:57 18:02	07:59 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	07:55 (B14) 19:57	05:54 21:37	04:50 22:10	04:58 21:46	04:58 20:40	05:57 19:18	06:59 18:00	08:01 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	07:56 (B14) 19:57	05:52 21:38	04:48 22:10	04:59 21:45	04:59 20:37	05:59 19:15	07:01 17:57	08:03 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	07:57 (B14) 19:57	05:49 21:40	04:47 22:10	04:57 21:43	04:57 20:35	06:01 19:12	07:03 17:55	08:05 15:53	08:51 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	07:58 (B14) 19:57	05:47 21:42	04:45 22:10	04:57 21:41	04:57 20:32	06:03 19:10	07:05 17:52	08:07 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	07:59 (B14) 19:57	05:44 21:43	04:44 22:10	04:57 21:39	04:57 20:30	06:05 19:07	07:07 17:50	08:09 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	08:00 (B14) 19:57	05:42 21:45	04:42 22:10	04:57 21:38	04:57 20:27	06:07 19:04	07:09 17:48	08:12 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	08:01 (B14) 19:57	05:40 21:47	04:41 22:10	04:58 21:36	04:58 20:24	06:09 19:02	07:11 17:45	08:14 15:48	08:51 15:44
29	08:20 16:39	07:11 17:46	05:57 19:47	08:02 (B14) 19:57	05:37 21:48	04:40 22:10	04:59 21:34	04:59 20:22	06:11 18:59	07:13 17:43	08:16 15:47	08:51 15:45
30	08:19 16:41	07:10 17:47	05:54 19:49	08:03 (B14) 19:57	05:35 21:50	04:38 22:09	04:59 21:32	04:59 20:19	06:12 18:56	07:15 17:41	08:17 15:46	08:51 15:46
31	08:17 16:43	07:09 17:48	05:52 19:51	08:04 (B14) 19:57	05:33 21:51	04:37 22:10	05:14 21:30	05:14 20:17	06:15 18:38	07:20 17:38	08:22 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction		106	257							373		
Oper. time red.		0.20	0.41							0.26		
Wind dir. red.		0.63	0.98							0.98		
Total reduction		0.12	0.63							0.63		
Total, real		13	65							0.16		
										59		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kirš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (78)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:51 15:48 17:48	08:15 16:45	07:11 17:48	07:37 (B14) 19 07:56 (B14) 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	08:09 (B14) 28 08:37 (B14)	07:23 16:36	08:24 15:45
2	08:50 15:50 17:50	08:13 16:48	07:08 17:50	07:34 (B14) 23 07:57 (B14) 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	08:08 (B14) 29 08:37 (B14)	07:25 16:34	08:26 15:44
3	08:50 15:51 16:50	08:11 16:50	07:06 17:52	07:33 (B14) 25 07:58 (B14) 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	08:07 (B14) 30 08:37 (B14)	07:27 16:32	08:28 15:43
4	08:50 15:52 16:52	08:09 16:52	07:03 17:54	07:32 (B14) 27 07:59 (B14) 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	08:07 (B14) 30 08:37 (B14)	07:29 16:30	08:29 15:43
5	08:49 15:54 16:54	08:07 16:54	07:01 17:56	07:31 (B14) 28 07:59 (B14) 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:25 18:43	08:06 (B14) 30 08:36 (B14)	07:31 16:27	08:31 15:42
6	08:49 15:55 16:55	08:05 16:57	06:58 17:58	07:31 (B14) 29 08:00 (B14) 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:06 (B14) 30 08:36 (B14)	07:33 16:25	08:42 15:41
7	08:48 15:56 16:59	08:03 16:59	06:55 18:01	07:30 (B14) 30 08:00 (B14) 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:06 (B14) 29 08:35 (B14)	07:36 16:23	08:34 15:40
8	08:48 15:58 17:01	08:01 17:01	06:53 18:03	07:29 (B14) 30 07:59 (B14) 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:06 (B14) 29 08:35 (B14)	07:38 16:21	08:35 15:40
9	08:47 15:58 17:03	07:58 17:03	06:50 18:05	07:30 (B14) 30 08:00 (B14) 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:07 (B14) 27 08:34 (B14)	07:40 16:19	08:37 15:39
10	08:46 16:01 17:05	07:56 17:05	06:48 18:07	07:29 (B14) 30 07:59 (B14) 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:07 (B14) 26 08:33 (B14)	07:42 16:17	08:38 15:39
11	08:45 16:03 17:08	07:54 17:08	06:45 18:09	07:29 (B14) 29 07:58 (B14) 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:08 (B14) 24 08:32 (B14)	07:44 16:15	08:39 15:39
12	08:44 16:04 17:10	07:52 17:10	06:42 18:11	07:30 (B14) 28 07:58 (B14) 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:09 (B14) 21 08:30 (B14)	07:46 16:13	08:40 15:38
13	08:43 16:06 17:12	07:50 17:12	06:40 18:13	07:30 (B14) 27 07:57 (B14) 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:31 (B14) 17 08:28 (B14)	07:47 16:11	08:41 15:38
14	08:42 16:08 17:14	07:47 17:14	06:37 18:15	07:30 (B14) 25 07:55 (B14) 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:13 (B14) 12 08:25 (B14)	07:51 16:10	08:43 15:38
15	08:41 16:10 17:17	07:45 17:17	06:34 18:18	07:32 (B14) 22 07:54 (B14) 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:14 (B14) 07:53	08:44 16:08	08:44 15:38
16	08:40 16:12 17:19	07:43 17:19	06:32 18:20	07:33 (B14) 19 07:52 (B14) 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:15 (B14) 07:55	08:45 16:06	08:45 15:38
17	08:39 16:14 17:21	07:40 17:21	06:29 18:22	07:35 (B14) 14 07:49 (B14) 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:16 (B14) 07:57	08:46 16:04	08:46 15:38
18	08:38 16:16 17:23	07:38 17:23	06:26 18:24	07:40 (B14) 3 07:43 (B14) 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	08:17 (B14) 07:59	08:47 16:03	08:47 15:38
19	08:36 16:18 17:26	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	05:51 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:18 (B14) 07:57	08:48 16:01	08:47 15:38
20	08:35 16:20 17:28	07:33 17:28	06:25 18:28	05:59 20:33	04:53 21:33	04:25 22:10	05:53 21:49	05:53 20:45	06:54 19:23	07:57 18:04	08:19 (B14) 07:59	08:49 16:05	08:48 15:39
21	08:33 16:22 17:30	07:31 17:30	06:18 18:30	06:18 20:35	04:57 21:35	04:25 22:10	05:55 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:20 (B14) 07:59	08:50 16:05	08:48 15:39
22	08:32 16:24 17:32	07:28 17:32	06:16 18:32	06:16 20:37	04:54 21:37	04:26 22:10	05:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:21 (B14) 08:03	08:51 16:05	08:49 15:40
23	08:30 16:26 17:34	07:26 17:34	06:13 18:34	06:13 20:39	04:48 21:38	04:26 22:10	05:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:22 (B14) 08:05	08:52 16:05	08:50 15:40
24	08:29 16:28 17:37	07:23 17:37	06:10 18:36	06:10 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:23 (B14) 07:07	08:53 16:05	08:50 15:41
25	08:27 16:30 17:39	07:21 17:39	06:08 18:39	06:08 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:24 (B14) 07:10	08:54 16:05	08:51 15:41
26	08:26 16:32 17:41	07:18 17:41	06:05 18:41	06:05 20:44	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:08 16:51	08:25 (B14) 07:12	08:55 16:05	08:51 15:42
27	08:24 16:34 17:43	07:16 7 07:50 (B14) 17:43	06:02 18:43	06:02 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:09 16:48	08:26 (B14) 17 08:33 (B14)	08:56 16:05	08:51 15:43
28	08:22 16:37 17:45	07:13 14 07:54 (B14) 17:45	06:00 18:45	06:00 20:49	04:40 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:10 16:45	08:27 (B14) 21 08:34 (B14)	08:57 16:05	08:51 15:44
29	08:20 16:39 17:49	07:13 17:49	05:57 19:47	05:57 20:51	04:37 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:12 (B14) 24 08:36 (B14)	08:28 (B14) 17 08:33 (B14)	08:58 16:05	08:51 15:45
30	08:19 16:41 17:51	07:13 17:51	05:54 19:49	05:54 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:10 (B14) 26 08:36 (B14)	08:29 (B14) 16:41	08:59 16:05	08:51 15:46
31	08:17 16:43		06:51 19:51		04:37 21:51	05:14 21:30	06:15 20:17		07:16 16:38			08:51 15:47	
Potential sun hours	235	266	366		426	508	529	469	385		324	247	216
Total, worst case		21	438						99		362		
Sun reduction		0.20	0.41						0.43		0.26		
Oper. time red.		0.98	0.98						0.98		0.98		
Wind dir. red.		0.62	0.62						0.62		0.98		
Total reduction		0.12	0.25						0.26		0.16		
Total, real		3	110						26		57		

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kikaukas (kad. apz. 56960030117001) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (12)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
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9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
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11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
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15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
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20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
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24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
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26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Kikaukas (kad. apz. 56960030117008) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (13)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Lovani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (65)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Udensrozes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (185)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:58	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:09	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:34 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:06	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:05 21:21	04:26 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:26	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:50	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Udri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (186)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	06:41 (B25) 06:48 (B25)
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:56
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:24 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:05	05:19 21:08	04:30 22:00
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	06:46 (B25) 06:52 (B25)	05:09 21:18
13	08:43 16:06	07:49 17:12	06:40 18:13	06:17 20:18	06:43 (B25) 06:56 (B25)	05:07 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	06:40 (B25) 06:57 (B25)	05:05 21:22
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	06:38 (B25) 06:59 (B25)	05:03 21:23
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	06:37 (B25) 06:59 (B25)	05:01 21:25
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	06:36 (B25) 07:00 (B25)	04:59 21:27
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	06:35 (B25) 07:00 (B25)	04:57 21:29
19	08:36 16:18	07:35 17:26	06:24 18:26	06:02 20:30	06:34 (B25) 07:01 (B25)	04:55 21:31
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	06:34 (B25) 07:01 (B25)	04:53 21:33
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	06:33 (B25) 07:00 (B25)	04:52 21:35
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	06:34 (B25) 07:00 (B25)	04:50 21:36
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:33 (B25) 06:59 (B25)	04:48 21:38
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:33 (B25) 06:59 (B25)	04:47 21:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	06:34 (B25) 06:59 (B25)	04:45 21:42
26	08:25 16:32	07:18 17:41	06:05 18:41	05:44 20:45	06:34 (B25) 06:57 (B25)	04:44 21:43
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	06:35 (B25) 06:56 (B25)	04:42 21:45
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	06:36 (B25) 06:55 (B25)	04:41 21:46
29	08:20 16:39		06:57 19:47	05:37 20:51	06:37 (B25) 06:54 (B25)	04:40 21:48
30	08:18 16:41		06:54 19:49	05:35 20:53	06:39 (B25) 06:52 (B25)	04:38 21:49
31	08:17 16:43		06:51 19:51		04:37 21:51	05:26 (B24) 05:59 (B24)
Potential sun hours	235	266	366	426	508	528
Total, worst case				405		1180
Sun reduction				0.50		0.56
Oper. time red.				0.98		0.98
Wind dir. red.				0.66		0.67
Total reduction				0.32		0.37
Total, real				130	102	434

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 06:21/4.0.531

## SHADOW - Calendar

Shadow receptor: Udri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (186)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:30 (B24) 06:09 (B24)	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36
2	04:31 22:08	05:29 (B24) 06:09 (B24)	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34
3	04:32 22:08	05:30 (B24) 06:09 (B24)	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32
4	04:33 22:07	05:30 (B24) 06:09 (B24)	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29
5	04:34 22:07	05:31 (B24) 06:09 (B24)	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27
6	04:35 22:06	05:31 (B24) 06:09 (B24)	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25
7	04:36 22:05	05:32 (B24) 06:09 (B24)	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23
8	04:37 22:04	05:32 (B24) 06:09 (B24)	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21
9	04:38 22:03	05:32 (B24) 06:09 (B24)	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19
10	04:40 22:02	05:33 (B24) 06:08 (B24)	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17
11	04:41 22:01	05:34 (B24) 06:09 (B24)	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15
12	04:42 22:00	05:35 (B24) 06:08 (B24)	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13
13	04:44 21:59	05:35 (B24) 06:08 (B24)	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11
14	04:45 21:58	05:35 (B24) 06:07 (B24)	05:41 20:59	06:44 (B25) 07:02 (B25)	06:43 19:39	07:44 18:20
15	04:46 21:56	05:37 (B24) 06:07 (B24)	05:43 20:57	06:43 (B25) 07:03 (B25)	06:45 19:37	07:46 18:17
16	04:48 21:55	05:37 (B24) 06:06 (B24)	05:45 20:54	06:42 (B25) 07:04 (B25)	06:47 19:34	07:48 18:14
17	04:49 21:54	05:38 (B24) 06:05 (B24)	05:47 20:52	06:41 (B25) 07:05 (B25)	06:49 19:31	07:50 18:12
18	04:51 21:52	05:40 (B24) 06:05 (B24)	05:49 20:49	06:39 (B25) 07:04 (B25)	06:51 19:29	07:52 18:09
19	04:53 21:51	05:40 (B24) 06:03 (B24)	05:51 20:47	06:39 (B25) 07:05 (B25)	06:53 19:26	07:55 18:07
20	04:54 21:49	05:42 (B24) 06:02 (B24)	05:53 20:45	06:38 (B25) 07:05 (B25)	06:55 19:23	07:57 18:04
21	04:56 21:48	05:44 (B24) 06:00 (B24)	05:55 20:42	06:38 (B25) 07:05 (B25)	06:57 19:20	07:59 18:02
22	04:58 21:46	05:46 (B24) 05:58 (B24)	05:57 20:40	06:38 (B25) 07:05 (B25)	06:59 19:18	08:01 18:00
23	04:59 21:44	05:49 20:37	05:59 20:37	06:38 (B25) 07:05 (B25)	07:01 19:15	08:03 17:57
24	05:01 21:43	06:01 20:35	06:01 20:35	06:38 (B25) 07:04 (B25)	07:03 19:12	08:05 17:55
25	05:03 21:41	06:03 20:32	06:03 20:32	06:38 (B25) 07:04 (B25)	07:05 19:10	08:13 17:52
26	05:05 21:39	06:05 20:29	06:05 20:29	06:39 (B25) 07:03 (B25)	07:07 19:07	08:15 17:50
27	05:06 21:37	06:07 20:27	06:07 20:27	06:38 (B25) 07:01 (B25)	07:09 19:04	08:17 17:48
28	05:08 21:36	06:09 20:24	06:09 20:24	06:39 (B25) 07:00 (B25)	07:11 19:02	08:19 17:46
29	05:10 21:34	06:11 20:22	06:11 20:22	06:41 (B25) 06:58 (B25)	07:13 18:59	08:21 17:43
30	05:12 21:32	06:13 20:19	06:13 20:19	06:43 (B25) 06:56 (B25)	07:15 18:56	08:22 17:41
31	05:14 21:30	06:15 20:17	06:15 20:17	06:46 (B25) 06:52 (B25)	07:20 18:52	08:51 17:38
Potential sun hours	529	469	384	324	248	216
Total, worst case	694	422				
Sun reduction	0.49	0.50				
Oper. time red.	0.98	0.98				
Wind dir. red.	0.67	0.66				
Total reduction	0.32	0.32				
Total, real	225	135				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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